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ABSTRACT

This volume of essays examines some of the problems and issues in the development of higher education in Southeast Asia. Part 1 consists of studies on higher education in Singapore, South Vietnam, Indonesia, Malaysia, Thailand, and the Khmer Republic. Part 2 consists of a number of case studies of specific universities in the process of development; and Part 3 deals with a number of specific issues in higher education that are of concern to countries in Southeast Asia. (MJM)

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DEVELOPMENT OF HIGHER EDUCATION IN SOUTHEAST ASIA: PROBLEMS AND ISSUES

Yip Yat Hoong
Editor

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FORWARD

One of the most significant and urgent problems facing the countries of Southeast Asia today is that of the educational system and the purposes for which it is designed. The rapid growth of population and the increasing demand for education at all levels pose the most serious problems for national governments at a time when resources are strained by inflation, defence needs, and essential development programmes. In the light of these pressures, the question of how much education and of what sorts a country should provide, and to whom, is of vital importance. This is the question that political and educational leaders the world over are asking and hoping to find the right answer.

The problem is particularly acute in the field of higher education because it is more expensive and because of its importance in fulfilling the technical and professional manpower needs in a country. At the same time, the democratic surges, the rising tide of expectation, and the identification of higher education with individual success and personal happiness have combined to create an almost irresistible demand for college and university education: a demand that has been reinforced by the greater prestige and higher salaries of university graduates. This demand has often succeeded in pressuring national governments into creating new institutions of higher education without regard to the specific manpower needs of the country. Consequently, there are constant complaints that development needs for trained manpower are not being met, that graduates in certain fields of specialization are unemployed, and that the mounting costs of university education are showing decreasing returns in terms of overall national development. This therefore poses the question as to whether higher education in Southeast Asia is being expanded and developed in the right direction.

This is a problem that is acutely felt throughout Southeast Asia. In the Philippines, the Report of the Presidential Commission to Survey Philippine Education states the problem clearly:

> There is a tremendous pressure of social demand for a university or college education which has swollen enrolments through a system of open entry. . . . Aggregate output of graduates is much greater than market demand or market needs resulting in unemployment and underemployment of educated manpower. On the other hand, there is a shortage of technicians and well-trained professionals.

In Thailand, a rather well-planned programme of university expansion attempted to meet national needs for trained manpower and regional leadership, but it could not meet the mounting social pressures for university education. The result was the establishment by the Legislature of Ramkamhaeng University, an open university which any secondary school graduate may enter. It was opened in 1971 with an enrolment of 37,000, thus almost immediately doubling the total enrolment in higher education in Thailand.

For many years in Malaysia there was only one university, the University of Malaya, a rather select institution, which, because of its selection procedures, and various institutional factors, tended to have a predominantly Chinese student population. Since 1968, there have been several new institutions proposed and two have been established: the University of Science of Malaysia (formerly the University of Penang), performing a vital role in that area; and the National University, with instruction almost exclusively in Malay. Now two other universities are being considered, one of which, the Agricultural University, has been approved and will begin next year. The other is the proposed Islamic University which would be offering a broad range of subjects other than Islamic studies. The Educational Planning and Research Division of the Ministry of Education is giving serious consideration to the role of these several universities in relation to the urgent needs of primary and secondary education (especially in the Malay stream), and to the manpower needs of the nation.

In Indonesia, likewise, even the very rapid expansion of the university system in the past few years has not fully met the demand for university places while at the same time there is beginning to develop some educated unemployment. This is showing itself in the social sciences and law, in which over 40 per cent. of the students are enrolled.

In the Republic of Vietnam, university and secondary school enrolments are setting new records every year. The University of Saigon now has 35,000 students scattered in buildings all over the city and enrolments in the six provincial universities, both public and private, bring the total to nearly 50,000. Students and staff both are seeking identity and purpose in the welter of change that is taking place in the Republic, and Dr. Le Thanh Minh Chau, the Rector of the University of Hué, has declared that 'there should be research into higher education itself. I mean research as to what kind of education is suitable for Vietnam, for this society'.

In view of this very rapid expansion of higher education, the following are some of the problems which have emerged throughout the countries of Southeast Asia.

1. *Social Demands* versus *National Manpower Needs*

In most countries in Southeast Asia, the demand for places in the universities exceed by far the number of places available; and this has happened despite the fact that during the 1960's university enrolments in Southeast Asia have more than doubled. On the one hand, this increased demand for higher education is due to both a quest for knowledge and the increased earning potential resulting from a university education. On the other hand, many of the secondary school systems in the region do not effectively prepare young people for anything except continuing studies and hence they find it difficult to seek suitable employment after obtaining a secondary school certificate. For these reasons, universities in Southeast Asia can expect to be under even greater pressures to increase their enrolments during the 1970's.

Yet, due to an absence or a lack of coordination among the universities and between the universities and the governments, the increased enrolments have not necessarily been in those disciplines most needed for national development purposes, thus resulting in graduate unemployment or underemployment.[1] At the same time, while higher education enrolments and expenditures expanded, these have not been accompanied by a comparable growth in graduates employment opportunities which seems to suggest that the growing investment in higher education is increasingly an investment in unproductive human resources.[2] This is evidenced by the fact that the average level of education among the unemployed is rising and that university graduates are turning to jobs that do not require their level of education and training. University graduates driving taxis in the Philippines is a case in point.

Therefore, while universities have an important role to play in producing high-level manpower, the number and types of graduates they produce should also be related to national development needs. On the other hand, ministries of education should not think that so long as the demand for places in the universities exceeds the supply, expansion is justified socially, if not economically. This is because uncontrolled expansion of higher education without corresponding productive employment opportunities is likely to generate political as well as educational unrest among the graduates. Meeting the excessive social demands for higher education might not be inappropriate during the 1950's and early 1960's when shortages of high-level manpower were general, but to continue to expand supply to meet the increasing demand through the 1970's and 1980's when opportunities for higher education already exceed national development needs is certainly not a sound policy. Governments of Southeast Asia should now begin to think in terms of selective rather than mass higher education.

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[1] At the Ramkamhaeng University in Thailand, for instance, out of 30,000 students who remained after the first semester at the end of 1971, 16,000 were studying law. It is difficult to believe that Thailand needs another 16,000 lawyers as against doctors, engineers and others or can provide productive employment for this large number of additional lawyers.

[2] This problem is not peculiar to Southeast Asia. See Edgar O. Edwards and Michael P. Todaro, *Educational Demand and Supply in the Context of Growing Unemployment in Less Develpoed Nations*, mimeograph.

2. *Institution Building and Staff Training and Development*
Several new universities are being created every year in Southeast Asia. Yet in all these countries staff recruitment has not been able to keep pace with the rising student enrolments. One immediate result is a brain drain from the old to the new universities, the existing staff get spread too thinly, and the quality of teaching is impaired.

Traditionally, there are two sources of staff supply for universities in Singapore and Malaysia: (i) expatriate staff, and (ii) local staff trained overseas, at least in their higher degrees. The supply of expatriate staff is limited since there is a general shortage of academic staff in most fields the world over. Therefore, in order to cope with the increased student enrolments, universities must increase the supply of foreign-trained local staff. This is difficult because most universities do not have long-term programmes for staff training and development. This has led to the suggestion that one or two of the well-established universities in Southeast Asia should start to develop strong postgraduate programmes that would create the supply of university lecturers for the new universities. One such suggestion which has created much interest is the establishment of a Southeast Asian University.

3. *Problems of Large Classes*
The large student enrolments, descending so suddenly on most universities in Southeast Asia, have created special problems for these institutions. Additional physical space has to be acquired, new admission procedures have to be devised, the system of lectures-*cum*-tutorials has to be re-examined, new audio-visual aids have to be introduced into the lecture theatres, new systems of examination and evaluation have to be found, and so on. In Indonesia, the problem of lack of physical space is partially solved, at least in the short run, by several universities sharing one lecture theatre or seminar room and taking lectures right into the night. In Thailand and Malaysia, closed-circuit television has been introduced into large lecture theatres. In many universities the traditional British system of instruction involving lectures and tutorials has to be changed simply because the tutorial classes are becoming too large to be meaningful, and objective testing might have to be introduced.

The question is whether all these would not impair the standard of instruction and the quality of university graduates. These are the immediate problems which confront any vice-chancellor, dean or head of department in any university.

4. *Relationships Between the National and Regional (Sub-National) Universities*

Most of the new universities in Southeast Asia are regional universities. Mindanao State, Xavier and Notre Dame Universities in Mindanao in the Philippines, the provincial universities in Indonesia, Chieng Mai, Khon Kaen and Songkhla Universities in Thailand, and the University of Science of Malaysia in Penang are examples of institutions which, whether by programme, concept, intent or circumstance, display dominant interest in regional problems. These universities have partly grown out of the growing governmental belief that national economic and social development, if it is to occur beyond the major urban centres, requires the decentralized growth of skills, organizational capacities and development programmes.

Yet, most countries in Southeast Asia do not have a central university development agency that could coordinate the developmental efforts of the national and regional or provincial universities. University administrators should explore ways in which national and regional universities could plan their programmes of teaching and research to avoid unnecessary duplication and competition.

It is evident that a reappraisal of the extent and direction of higher education development is needed throughout the countries of Southeast Asia. Problems of higher education need to be identified and solutions found. However, the solutions to these problems ought not to rest solely on the shoulders of the universities. We do not yet have the precise tools for educational planning and universities are seldom given adequate information upon which to build their programmes. How are national needs identified and who determines them and on what basis? Manpower projections are still quite imprecise and even the most sophisticated cost-benefit and rate of return analyses are of limited application. Therefore the governments have the responsibility to develop and refine the planning process by which university development can be guided to meet national needs.

What is also needed is a re-examination of the fundamental role of the university in Southeast Asia. Besides being a teaching and research institution, concerned primarily with the accumulation, preservation and dissemination of knowledge, a university has a responsibility to cater to the development needs of the society. One such responsibility is the contribution of the university towards the planning and implementation of national development programmes which are designed to raise the social and economic well-being of the people in the country.

All countries in Southeast Asia have recognized the importance of planning as a means of advancing and accelerating economic growth. Each has drawn up development plans of varying degrees of comprehensiveness. Although these plans have different priorities depending on the political structure, social system and national aspirations of each country, they all give considerable emphasis to social and economic development and stress the importance of raising the living standards.

In the formulation and implementation of these development plans, all countries in Southeast Asia have more or less one common problem the shortage of technical and managerial expertise. Consequently, such expertise have to be imported, often at great cost to these countries. Yet, most of these countries have well-trained resource personnel in their universities whose expertise have hardly been tapped for this purpose.

There are at least three areas in which universities could make a useful contribution towards the promotion of economic and social development. These are training, research and consultation.

From the standpoint of social and economic development, the most important role of the university as a teaching institution is to produce high-level manpower to meet national needs. One such function lies in the training of planners in government development agencies. Every government development agency in any country in Southeast Asia is faced with a shortage of competent planning officers. This problem is temporarily solved by the importation of foreign expertise. The Harvard University Development Advisory Group in Malaysia is a case in point. While the foreign experts are at the job, local officers are being trained overseas with the view of replacing the foreign experts on their return from training over the years. The trouble is that only a limited number of officers could be trained in a year because of the high cost of overseas training. At the same time new government agencies are being created every year which increases the demand for such people. Consequently, it does not look as if the gap between supply and demand will ever be narrowed; if at all, it is widening and foreign experts will continue to be needed at great costs to the government.

It is here that the university has a significant role to play by creating a postgraduate programme in development economics that has a practical and problem-oriented approach. Part of this postgraduate programme should consist of case studies local cases and problems that the planning officers have to deal with from day to day. It is conceivable that not all the resource personnel for such a training programme may be found in the country. In this case, let the university import the necessary resource personnel. It will still be cheaper this way for the country. Over the years, local instructors would have acquired the experience to take over the whole training programme.

The second input of the university is research. For research to be valued and its products respected and used, there must be a close relationship between the university researcher and the government administrator. Such a relationship is not easy to establish and in the context of Southeast Asian countries such a relationship between the university researcher (as the producer of research) and the government administrator (as the consumer of research) is absent or, at best, loosely established. To strengthen this relationship, the government administrator has to acquire the ability to use the concepts of analysis which underlie the university researcher's approach to problems while the university researcher has to be familiar with the government administrator's problems which are usually very practical in nature. Unless the producer and the consumer of research are prepared to cooperate there can be no fruitful utilization of research. One way of stimulating this cooperation is for the university researcher to engage in problem-oriented types of research than can be readily used by the government administrator.

For this reason, research in the university, if it is to be useful for social and economic development, should be largely applied research—practical in approach, problem-solving, development-oriented and policy-oriented. This would imply a re-thinking of the research role of the university and a re-defining of the concept of academic freedom. The ivory-type of a university in which research is done for its own sake without thought of its applicability or utilization will have no place in this context. This is often not readily or easily accepted by academics who regard it as an infringement on their academic freedom.

The third input of the university is consultation. The point has earlier been mentioned of the dearth of planning expertise in government development agencies in the countries of Southeast Asia and the need to import foreign consultants at great cost to these countries. Yet, in most of the universities in the region there is a pool of planning expertise which has virtually been untapped. Why is this so? There are a number of possible reasons for this.

First of all, there is the traditional concept of a university as a training institution. University lecturers are not expected to soil their hands in the field. Research, if undertaken is theoretical in nature that would add to the world's knowledge on the subject and hence may have no relevance at all to the society one lives in. This ivory-tower image of the university no doubt explains why government development agencies find it difficult to accept university lecturers as consultants where they would be called upon to deal with practical problems of development.

Another reason pertains to differences in the approach to research and consultation between an academician and a government development officer. More often than not, a government development agency is in a hurry to find a solution to a problem whereas an academician tends to take his time to collect the pertinent data and analyze these before prescribing a remedy. When answers to development problems are long in coming, decision-makers in the government often resort to intuition and rule-of-thumb methods. An academician should never subscribe to such practices.

Another reason is the absence or lack of monetary incentives for university personnel td consult for the government. Governments may be willing to pay a small fortune for the services of foreign consultants and yet be unprepared to pay a small fee for the services of local dons. It boils down to the fact that a prophet is not acceptable in his own land.

Another reason has to do with the rigid administrative system in the universities which sets narrow limits to the amount of outside research or consulting work a staff member could do. There is the constant fear that a staff member would neglect his teaching commitments. This might be justifiable if a member of staff of a university spends too much of his time doing research and consulting work outside the campus as is happening in some universities in other parts of the world where a well-known professor may spend just one day in a week with his students. But with universities in this part of the world, the reverse is the case where university personnel spend all their time inside the campus and are seldom called upon to assist in development activities for the government.

Yet another reason, which is often advanced from the government side, is that 'bureaucratic procedures subject development plans, for a definite or indefinite period of time, to security grading and there is no case for letting the "cat out of the bag" even to truth-seeking dons'. What has not been explained is why local dons should be regarded as security risks and foreign consultants are not!

In Southeast Asian countries today there is a demand for planning expertise by the government development agencies while the universities have the supply. Yet, an exchange has not taken place, or at best, only in a limited way. The reason is that the consumer prefers a better known product, usually USA-made or British-made although the price may be several times higher. What is disturbing is that both the foreign and the local products very often come from the same source an American or a British university.

Any move to relate the university in Southeast Asia to national development planning calls, on the one hand, for the university to accept this social responsibility and, on the other hand, for the government development agencies to recognize the fact that the university can make a significant contribution towards national development planning, whether in terms of training, research or consultation, if called upon to do so.

This volume of essays is an attempt to examine some of the problems and issues in the development of higher education in Southeast Asia. Contributors to this volume are Southeast Asians who have been or are presently involved in the development of higher education in their own institution or country.

This volume is divided into three parts. Part I consists of a number of country studies; Part II consists of a number of case studies of specific universities in the process of development; and Part III deals with a number of specific issues in higher education that are of concern to countries in Southeast Asia.

December 1972 Yip Yat Hoong

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PART I

COUNTRY STUDIES

PROBLEMS AND ISSUES OF HIGHER EDUCATION DEVELOPMENT IN SINGAPORE

*Ruth Wong**

THE CONTEXT

Like most contemporary young societies, Singapore spent the period of the 'fifties in an attempt to attain self-government and free herself from colonial domination.

She entered the decade of the 'sixties with many problems on her hands. Politically, she became part of Malaysia in 1963 but, within two short years, she had to abandon this relationship and was left cold and alone on the doorstep of Malaysia. Her neighbour, Indonesia, was not particularly friendly, having begun a 'confrontation' under Soekarno against the new-formed Malaysia. The economic forecast in 1965 was bleak: what could a tiny island of some 400 square miles, supporting a population close on two million and without natural resources, do under circumstances of hostility? Furthermore, any efforts towards economic viability must presume both political and social stability. Serious communal riots had occurred in 1964 and, even as a strong political leadership set about to tackle these problems, talks of an impending withdrawal of the British forces from their Singapore base laid bare the prospect of a formidable unemployment problem.

Despite the many shadows that fell across these years, however, the term, 'Development Decade of the 60's,' was more than exemplified in Singapore. The political climate stabilized; bureaucracy was revamped; the backbone of the slum and housing problem was broken with a massive slum clearance and rehousing scheme; schools were built at the average rate of almost one each month to provide enough places for children of school-going age. With deliberate effort, people were constantly exhorted to live harmoniously together as a multiracial and multilingual nation. A vigorous family-planning campaign reduced the birth-rate from a high annual rate of 3.5 per cent. to one close on 2 per cent. Today, it is even lower at 1.8 per cent. Administrative and social infrastructures responsive to national goals and a basic physical infrastructure for industrialization were set up. The struggle was hard, but it won.

As Singapore entered the 'seventies, she was able to take the year 1971 in her stride. This was a year anticipated with some apprehension inasmuch as it was to see the final phase in the run-down of British troops. To-day, industries are burgeoning everywhere. Unemployment is no longer a problem since there are more jobs than workers available. The aim is to identify, from now on, the more sophisticated industries for the Republic, namely, those industries which are less labour-intensive but which require more skill-training and hence will meet the enhanced aspirations of an increasingly better-educated population for better income and higher standards of living. Economic activity has been diversified. Instead of the heavy reliance on entrepôt-trading inherited from the colonial past, new directions are taken towards strengthening such sectors as manufacturing, tourism, shipbuilding and ship-repairing. Singapore is third (with Japan and Hong Kong) in developing containerization, and is fast becoming the home of the Asian dollar.

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The foregoing introduction is necessary in order to provide the backdrop against which higher education can be considered and discussed in a correct perspective.

DEVELOPMENT AND GROWTH OF HIGHER EDUCATION

There are five institutions of higher education in Singapore—the two universities of Singapore and Nanyang, the Polytechnic, the Ngee Ann Technical College and the Teachers' Training College. In function, the two universities complement one another; so do the two technical institutions. Courses are so organized as to avoid wasteful duplication.

Logically speaking, the multilingual, four-stream structure of primary and secondary education should lead to a similar structure at tertiary level. However, the majority of students entering these institutions (more than 90 per cent.) are from the English and Chinese streams. The very few Malays and Tamil-speaking Indians, who enrol from other than the English stream, normally enter the University of Singapore where they undergo an intensive programme at the Language Centre in order to improve their proficiency in the use of the English language. Of the five institutions, the Polytechnic and the Ngee Ann Technical College, besides the University of Singapore, offer courses in English. At the Teachers' Training College, where courses were given in all four language media—English, Chinese, Malay and Tamil—in the early to mid-'sixties, the trend is toward demand for instruction in English and Chinese only. The fact that four out of five institutions (Nanyang[1] being the only one offering instruction in Chinese) either instruct in English or offer courses mainly in English (as at the Teachers' College) points to the recognized viability of English as a language of technology, commerce and industry.

However, there is a growing and emphatic insistence on bilingualism so that each person may be at least as proficient at his mother tongue as in English. The bilingualism policy is important to Singapore where it is neither desirable that English, the language with economic currency, should be discounted, nor that the four major native languages should be forgotten, because their loss would imply a severance from deep cultural roots which have produced the colourful ethos and distinct identity of her multiracial people. Hence, it has been officially declared that students will be required in the not too distant future to provide evidence of satisfactory attainment in two languages as a condition for admission to tertiary institutions.

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[1] While mainly offering instruction in Chinese, Nanyang University also gives certain science-based courses in English.

Of the five institutions, the University of Singapore is the oldest. Its origins date from as early as 1905 when a College of Medicine was established. Its predecessor, the University of Malaya, was formed after the cessation of World War II and at that time comprised the three Faculties of Arts, Science and Medicine (including the departments of Dentistry and Pharmacy) inherited from two pre-war colleges, Raffles College and the King Edward VII College of Medicine. This phase was followed by an interim period during which the University became two largely autonomous divisions of equal status, one in Kuala Lumpur and the other in Singapore. The University of Malaya in Singapore continued from 1959 to 1962 when it became formally the University of Singapore.

UNIVERSITY OF SINGAPORE

The University of Singapore commenced with four faculties–Arts, Science, Medicine (including Dentistry and Pharmacy) and Law. It had also the School of Education and the non-faculty Department of Social Studies. All these faculties and non-faculty departments had been previously established under the University of Malaya. The Faculty of Arts was at that time equipped to offer the traditional humanist and liberal arts courses as well as Political Science, which was introduced much later than the rest. The Faculty of Science comprised the normal departments of the physical and biological sciences and mathematics–five departments in all; the Faculty of Medicine and seventeen departments offering the usual courses leading to undergraduate degrees in medicine and dentistry.

Law was then a one-department faculty offering, nonetheless, a range of legal specialities at the undergraduate level.

Since 1962 much reorganization and expansion have taken place. The objectives of development have become more consonant with national goals.

To encourage greater interest in the multi-ethnic heritage of Singapore, the Chinese and Malay language and literature departments were both expanded to include other important subjects such as their respective philosophies, art, archaeology and history.

A Centre of Southeast Asian Studies was set up in 1963 to promote research with regional emphasis. Also to provide research information which would 'assist policy-makers in formulating plans of economic and social advancement'[2] and to train research personnel, the Centre for Economic Research was established in 1965. Within the Faculty of Medicine, a School of Postgraduate Medical Studies was inaugurated in 1964 as a logical extension of the undergraduate Medical Faculty to promote postgraduate studies and provide refresher and specialist diploma courses as well as other courses leading to higher degrees. Similar extension of course work occurred in the Faculty of Law. A new Faculty of Social Sciences was set up.

New subjects continued to be added and new directions taken. A more recently discernible trend lies in the introduction of more professional courses related to the needs of a rapidly industrializing and modernizing society. Departments in Applied Chemistry, Accountancy, Business Administration, Social Work and Social Administration, Civil, Mechanical and Electrical Engineering, Architecture—all are indicative of this trend. At the same time, certain demands arising from increased sophistication and aspiration in the people made it seem fit to strengthen the Extramural Studies Department and to consider the building of an Institute of Medical Specialities.

Due attention too has been paid to the importance of the fine arts in national life. Plans for the setting up of a Department of Music has been approved and a pro-tem head has been appointed. This department will initiate music as a minor subject in 1973 and offer it as a major in 1974.

The increase in the courses offered over the past decade and the trend towards more professionally-oriented disciplines of recent origin may be gauged from Table 1. Notice the decrease in enrolments in Arts/Social Science and in Dentistry/Pharmacy for whose graduates employment opportunities have become comparatively less favourable than in those of other disciplines.

NANYANG UNIVERSITY

Developments at Nanyang University bespeak more progress in recent years than in the early period of its development.

Nantah, as it is popularly known, was set up in 1956 largely through a Chinese initiative to meet a serious problem precipitated by the post World War II civil struggle in China which closed the avenue to higher education to many Chinese high-school leavers in Singapore and Malaya. The period 1956-64 was relatively unstable for the University as it had then to face such problems as insufficient financial support, withholding of government recognition of its degrees, and inadequacy of staff among whom there was a rapid annual turnover because of unsatisfactory conditions of service. With the intervention of the Government in 1964, an extensive reorganization of the University took

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[2] University of Singapore, *Annual Report*, 1964-5, p. 2.

TABLE I

PERCENTAGE INCREASE IN COURSE ENROLMENT AT THE UNIVERSITY OF SINGAPORE BY YEAR

YEAR / COURSES	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Arts/Social Science	(423)	13.89	21.75	19.2	14.71	16.61	22.62	*- 6.32*	*-12.03*	*-16.89*
Science	(383)	13.11	12.59	14.56	11.46	15.99	14	*- 4.12*	*-16.42*	*-17.19*
Law	(359)	18.66	*-16.08*	10.95	*-12.8*	*- 1.29*	13.87	1.42	0.28	3.64
Medicine	(582)	2.23	8.24	2.33	3.49	*- 2.71*	1.51	*- 6.14*	*- 2.58*	0.32
Dentistry	(136)	22.79	8.98	3.3	4.79	2.07	2.12	*- 9.25*	*- 6.79*	*- 7.28*
Pharmacy	(102)	0.99	18.81	18.33	*- 5.97*	*-13.56*	*- 7.27*	*-37.5*	*-35.59*	*- 7.27*
Business Administration	—	—	—	—	(24)	125	31.48	185.92	40.39	26.32
Accountancy	—	—	—	—	—	—	—	(401)	14.21	1.09
Architecture	—	—	—	—	—	—	—	(94)	42.55	23.31
Building/Estate Management	—	—	—	—	—	—	—	(34)	214.7	32.71
Engineering	—	—	—	—	—	—	—	(394)	67.01	26.44
Education	(164)	*- 9.33*	*-435.71*	46.64	*-17.14*	51.43	49.06	—	—	—

Notes:
1. Figures in brackets indicate actual enrolment.
2. Negative figure (italics) show decreases.
3. Diploma in Education Courses were transferred to the Teachers' Training College after 1968.

place. The Government agreed to give financial support to Nanyang University on the same basis as in the case of the University of Singapore, without compromising the University's identity in any way.[3]

The reorganization included the revision of the total curriculum and the replacement of the American degree structure with a British one, leading to pass and honours level awards. The Government formally accorded recognition to Nantah's degrees in 1968.

Nanyang University comprises the three colleges of Arts, Science and Commerce. The subjects offered are not entirely the same, however, as those available at the University of Singapore. For example, Library Science and Journalism have been recently introduced in the College of Arts. It is also intended to set up a College of Graduate Studies.

A Nanyang University ten-year development plan which has due regard to national needs is presently being prepared. Under this plan, the following are important recommendations:

(i) To increase enrolment in the business administration course from 700 to 1,500: the overriding consideration in this decision is that Nanyang students, who are all required to be bilingual, though receiving instruction in Chinese, should serve better in commerce and industry than University of Singapore graduates.

(ii) To increase the range of subjects which will serve better the cause of industry: such subjects as have been recommended for addition are applied biology, applied physics, applied mathematics, statistics and computer science.

(iii) To start a degree course in fine arts and music.

(iv) To develop a programme for psychology and journalism.

(v) To set up an Institute of Chinese Studies for postgraduate research in such areas as the teaching of Chinese as a second language.

(vi) To increase the honours graduate intake in order to enable Nantah to become a larger supplier of Singapore's highly-skilled, degree-level manpower. By comparison the production of honours degree graduates at Nanyang University is far below that of the University of Singapore.

THE POLYTECHNIC

An institution mooted early at the turn of the decade of the 'fifties, the Polytechnic was not founded until 1958. Its development is clearly discernible in three stages.

At the initial stage, there was no clear direction as to its function. It offered then a proliferation of courses of many levels and many types.

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[3] Nanyang University, *Calendar*, 1971-2, p. 15.

The year 1959 ushered in the second stage when its role as an institution was redefined as one which was to be largely responsible for the production of the technically-trained manpower required to support the new government's vigorously-persued industrialization programme. Its function was not to duplicate courses and training already available at other institutions. With its role and function more clearly delineated, reorganization took place. Such courses as the general and office arts courses were withdrawn. The Department of Commerce was reorganized as a Department of Accountancy while that of Science and Technology, which offered pure science disciplines already available at the Universities of Nanyang and Singapore, was abolished. The Physics section of the latter was incorporated into the Department of Engineering. Thus the range of courses was made more relevant to purpose at this stage although multi-level work remained to include courses at professional, technician and craft levels.

A re-assessment of purpose was made in 1963. This marked the beginning of the third stage in development when serious thought was given to the raising of the status of the Polytechnic to that of a university. It was then that all craft courses were transferred to the Singapore Vocational Institute to narrow the spectrum of levels of training to those of the professional and technician courses. Some suggestion was made at this stage that perhaps the Polytechnic might eventually develop into two separate institutions a technical college and a technical university. After much cogitation, this did not materialize. It was decided in 1965 that, in view of rapid increases in enrolment at the technician level, the Polytechnic should confine itself to technician training. On this resolution, an arrangement was made with the University of Singapore whereby trained professional graduates of the Polytechnic were to be awarded degrees by the University.

Later in 1968, the professional degree streams of the Polytechnic were transferred to the University of Singapore where corresponding departments in Accountancy, Architecture and Building and Engineering were set up. The last department was accorded faculty status. Since then, the Polytechnic has been reorganized into two main schools the Schools of Industrial Technology and Nautical Studies, the former with Departments of Civil Engineering and Building, Electrical and Electronic Engineering, Mechanical and Production Engineering, a Marine Engineering and Shipbuilding Division, a Rubber and Plastics Division and a Mathematics and Science Division. The School of Nautical Studies offers a number of sea-training courses ranging from special pre-sea courses to fulltime marine engineering courses.

Developments at the Polytechnic, then, may be seen to be related to a consistent effort to afford it a distinctive role as a supplier of skilled middle-level manpower. Its graduates hold diploma or certificate qualifications.

NGEE ANN TECHNICAL COLLEGE

This is the most recent of the institutions of higher education. Much in the tradition of Nanyang University, it was established in 1963 as an independent college sponsored entirely by Chinese enterprise, in this case the Ngee Ann clan. It offered degree courses in arts, science and commerce but at somewhat lower than acceptable standards. This posed the problem of the recognition of its qualifications and, as in the case of Nanyang University, the Government intervened to assess the role of Ngee Ann in the context of Singapore's development and educational system. In 1966 the clan or *kongsi* accepted the recommendation to reorganize the College into a technical college to offer diploma courses in engineering and commerce to meet the growing needs of industry and commerce in Singapore.

With the acceptance of the new policy, the degree programme was phased out and the first intake of students for the Technician Diploma in Mechanical Engineering was made in 1968. In the same year it was formally declared a public educational institution by an act of Parliament and became known as Ngee Ann Technical College. The NATC presently comprises three departments, those of Mechanical Engineering, Electrical and Electronic Engineering, and Commerce. Its specific role is given in these words:

> The fast pace of industrialization has brought about an increasing shift towards industry requiring greater technological know-how which has in turn resulted in an increasing demand for technical as well as managerial personnel. To meet this demand for suitably trained manpower, the Singapore Government has, as a long-term measure, reorganized the entire educational system to focus on technical education. The reorganization and expansion of NATC will play an important part in this reorganization programme.[4]

A five-year development and expansion programme (1971-5) for NATC envisages a vast physical expansion, forty man-years of expert services for curricular development and a staff development scheme. The underwriting of this project by a generous loan given by the Asian Development Bank has made it viable. Together with the Polytechnic, NATC will meet adequately Singapore's growing demands for skilled technicians in various trades and industries.

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[4] NATC *Prospectus*, 1971-2, p. 9.

THE TEACHERS' TRAINING COLLEGE

In one respect, the Teachers' Training College (TTC) stands out from the other four institutions. The period of its quantitative development is over. It enters a new phase for quality development beginning with 1972.

Founded in 1950, it marked a serious attempt to put teacher training on a formal basis. Until 1959 it offered either two-year full-time certificate courses or three-year part-time normal courses. With the unprecendented expansion of the school system in the 1960's, TTC embarked on a total part-time programme for students who, while pursuing courses at the College, had at the same time to assume teaching responsibilities in school. While this course of action was frequently deplored as depriving students at the College of a closer and more intimate contact between lecturer and learner, yet, in its own way, it was innovative and realistic in that it catered to the needs without either disrupting the process of educational expansion or taking off much needed personnel from school-rooms. There was also introduced during the same period the training of teachers for all four linguistic streams of education—a vast undertaking inasmuch as, before this period, English was the only medium of instruction.

It was inevitable that much was left to be desired from a qualitative point of view. Staff-student contact opportunities were minimal: staff strength was inadequate and resort had to be made to the use of a great number of part-time personnel. Time spent on teaching-practice supervision was negligible and, generally speaking, because of the heavy lecture loads, staff had little opportunity to read more widely than what was required by their immediate assignments. Thus the part-time scheme was, at best, only acceptable on *an ad hoc* basis.

The period of expansion at TTC, then, was also one which spawned many problems. However, the need for part-time courses diminished as demand for education in schools stabilized. By 1967 it was possible to reconsider the re-introduction of full-time courses. Once again, the two-year, full-time certificate-in-education course for non-graduates was offered.

In the second-half of the decade of the 'sisties, TTC was also involved in the training of graduate teachers. Certain developments at the School of Education of the University of Singapore and the exigencies of demand necessitated this. The part-time course for graduate teachers for which a certificate-in-education was the award at the TTC existed alongside the full-time course conducted at the University. The latter carried the award of a Diploma in Education. Both part-time and full-time training were of one year's duration. Students of the diploma course had much more classroom tutelage and were better informed in theory. Despite the difference in the types of preparation, the Government at that time agreed to recognize the two qualifications as equivalent for entry into the teaching service, which, incidentally, was the largest employer of Nanyang University graduates in the civil service and paid them graduate salaries even before Nanyang degrees received official recognition in 1968.

More recently (December 1971) the School of Education at the University of Singapore was closed down. The Department of Education at Nanyang had already ceased to exist after evaluation of its work had been carried out by the Wang Gangwu Curriculum Review Committee in 1965. To-day, therefore, TTC assumes the role of the sole institution responsible for the preparation and education of teachers for all levels of schools and for all types of linguistic streams. To it has also been assigned the responsibility to teaching and supervising graduate teachers who enrol for higher and research degrees in Education of the University of Singapore. The pre-service training of graduates is now uniform, with the phasing out of the part-time programme. All trained graduate teachers have qualified for the Diploma in Education of the University of Singapore since 1971. In recognition of this important relationship between the TTC and the University of Singapore, the Principal of the College was appointed a member of the University's Senate and its Board of Postgraduate Studies early in 1972.

One other development in the TTC needs to be mentioned. The Government's stress on the importance of industrialization was underscored by the setting up of vocational institutions and the introduction of technical course for schools. It became TTC's task to produce the teachers for the job of teaching technical subjects. As full-qualified technicians and engineers were in short supply owing to the demand for them in the private sector, the first task of TTC in respect of this responsibility was the retraining in late 1968 of some 370 general education teachers for use in secondary technical streams and in the vocational institutes. This was an in-service type course which combined both technical and pedagogical training. The retraining responsibility continues to this day for the Technical Teachers Department of the TTC, but the long-term objective is to offer pre-service professional training to those already holding technician diplomas or engineering degrees so that more knowledgeable and qualified teachers may be made available for technical streams in secondary schools.

ROLE AND PURPOSE OF HIGHER INSTITUTIONS IN SINGAPORE

From the overview of developments in the programmes and physical expansion of the various institutions, one point is clear—all higher institutions, whether fully government like TTC or quasi-government like the others, are totally subsidized or almost totally financed by the Government. Support from outside sources, if it exists at all, is almost negligible. For this reason the accountability of higher institutions of learning to make effective contribution to society is doubly stressed and this, in the light of national goals.

'Universities,' said Dr. Toh, both Vice-Chancellor of the University of Singapore and Minister for Science and Technology, 'should be regarded as expensive investments for manpower that will serve Singapore's society.'[5] In the same strain, the Minister for Education said at the 1972 convocation ceremony of Nanyang University:[6]

> The Government is bent on pushing through its policy of bilingualism. The University of Singapore and Nantah, being the two highest institutions of learning in the country, will no doubt give their fullest support to this policy. . . . Nantah being the highest institution of learning in Chinese, should at the same time fulfill an important role in promoting the study of Chinese in our country. You will recall that in last year's graduation ceremony, I suggested that a Chinese Studies Research Centre should be established in Nantah to promote Chinese studies. . . .

Likewise, the reorganization of courses at the Singapore Polytechnic and the Ngee Ann Technical College, and the expansion of the Training College programme to include training for technical teachers, reflect the expected 'down-to-earthness' of Singapore's higher institutions of learning. The ivory-tower concept bespeaks, in the words of Dr. Toh, an 'obsolescent nineteenth century model which is inadequate for a society that has accelerated into modernity.'[7]

At a manpower conference held recently in Singapore, the Prime Minister also stressed the role of higher institutions in leading 'informed thinking into the problems which the nation faces.' He referred to the fact that such institutions in Singapore had fulfilled the purpose of producing 'the teachers, administrators, the men to fill the professions, the accountants, architects, lawyers and the technocrats,' but they had yet to produce men capable of 'definitive thinking': men who could 'expound the problems and then to propound . . . the solutions in many fields'. He continued:

[5] The Hon. Dr. Toh Chin Chye, Speech at the convocation ceremony of University of Singapore, August 1972.

[6] The Hon. Mr. Lim Kim San, Speech at the convocation ceremony of Nanyang University, July 1972.

[7] *Op. cit.*

> Whether it is in economics or in defence or in the problems of nation-building there is no informed, coherent thought . . . I would remind my nationals that having a national university means more than just nationals manning the university. It means an organism which responds to the needs and challenges of our times in this particular part of the world, in this society. When we achieve in producing an unending and self-generating core of men who can do this with ever-increasing quality and standards, then we have succeeded in establishing civilized standards for a satisfying community in the post-independent stage.

But what of the layman's concept of the university's role? The majority of parents and students believe that the university or other tertiary institutions should be primarily concerned with preparing and guiding students for a career.

In Singapore, therefore, the concept of the university or a higher learning institution as a place where pure knowledge is pursued for its own sake is considered far-fetched. Deliberate controls are set on admission to higher learning institutions to preclude the phenomenon of educated unemployables. But this is not as harsh as it sounds, inasmuch as numerous jobs are being created through rapid industrialization. Besides, a firm belief in the meritocrat concept together with a generous bursary scheme ensures that every individual, what, ever the socio-economic group from which he comes, can make it to the highest level of learning, provided he furnishes evidence of his capacity.

Consideration of this last aspect of the university's purpose leads to the need for a closer look at the delicate balance between supply and demand in terms of manpower needs.

DEMAND AND SUPPLY

That the tertiary institutions have played an important part in the production of skilled manpower in the last decade is reflected in part in the growth of Singapore's GDP. In 1959, manufacturing, construction and utilities together accounted for 13 per cent. of Singapore's GDP and this increased to 28.2 per cent. in 1970. Between 1961-70, there was a total output of 2,950 scientists and 348 engineers. It is estimated that, in order to accommodate the further growth of industries in the present decade, a total of 4,713 science graduates and 2,451 engineers need to be prepared. Beyond this high-level manpower need to be met by the universities, middle-level manpower, to which both the Polytechnic and Ngee Ann College have to address themselves, is of the order of twenty times the magnitude of the production effort in the 'sixties. Between 1961-70 only a total of 1,237 technicians were trained, whereas the projected needs for 1971-80 require an output of 21,375.

It may be seen from Table 2 that the projected figures for scientists can be comfortably met, provided they are trained within those disciplines of greatest demand to industry. It is this consideration which has influenced Nanyang University to plan for the introduction of applied science disciplines in its development programme for the next ten years. Likewise, at the University of Singapore where departments in applied sciences already exist, the concentration will be on the production of sound first-degree scientists rather than of researchers on rare topics.

However, a look at the figures also betray the gross shortages in engineers and technicians when output is compared with projected targets to meet demand. Table 3 gives the output from both the Polytechnic and the Ngee Ann Technical College for the past five years. At the higher level only the University of Singapore produces engineers. Well aware of the demand, the development plan of the University places the expansion of the Engineering Faculty as a matter of urgent priority. Joint UNDP-World Bank aid has been promised and Phase I in the programme for the improvement of facilities and the re-siting of the University at Kent Ridge will largely be concerned with the establishment of vastly expanded engineering workshops, laboratories and facilities.

For the same purpose, improvements in the facilties at both the Polytechnic and the NATC are projected. Several new courses will be started as the demand justifies and the availability of facilities permits. At the NATC, the number of students enrolled is expected to increase to about 3,000 by the end of 1973 as compared with the present 900.

As in other countries, pressure for admission into the universities is generated by a groundswell of aspiration, made possible, particularly in the last ten years, by the better educational opportunities available to children of school-going age. The aim with Singapore's educational planners is to direct this to optimum results by paying due attention to manpower needs. The controls at admission are therefore benign methods at gentle persuasion, supported by improved programme in vocational guidance and counselling at secondary-school and pre-university level. New subjects at the universities and technical institutions are introduced where shortages are evident. These are estimated up to the year 1980. Places in Arts faculties are not carelessly multiplied. The fact that the University of Singapore, the Polytechnic, the Nanyang University and the NATC all carry expansion programmes for the next ten years is proof that the consumers of higher education are not being discounted. What is of primary concern is that the type and quality of education offered will ensure maximum satisfaction for both supplier and consumer.

It is reported, for example, that 75 per cent. of the total who are enrolled currently for higher degrees at the University of Singapore are already in em-

TABLE 2

OUTPUT OF GRADUATES AT THE UNIVERSITY OF SINGAPORE AND NANTAH, BY FACULTY, 1967-71

FACULTY	Singapore					Nantah				
	1967	1968	1969	1970	1971	1967	1968	1969	1970	1971
Arts & Social Sciences	193	201	238	325	389	113	93	175	214	283
Science	265	271	312	386	389	170	137	248	205	260
Law	66	46	45	60	79	—	—	—	—	—
Accountancy	25	37	79	82	83	166	103	210	137	192
Business Administration	—	19	32	28	64					
Medicine	128	106	120	124	96	—	—	—	—	—
Dentistry	34	27	35	43	38	—	—	—	—	—
Pharmacy	38	40	26	45	31	—	—	—	—	—
Architecture	—	—	—	4	5	—	—	—	—	—
Building/Estate Management*	—	—	—	—	—	—	—	—	—	—
Engineering	—	37	68	66	79	—	—	—	—	—

*Recently introduced.

TABLE 3

OUTPUT OF THE SINGAPORE POLYTECHNIC AND THE NGEE ANN TECHNICAL COLLEGE, 1967-71

FACULTY	Singapore Polytechnic					Ngee Ann Technical College				
	1967	1968	1969	1970	1971	1967	1968	1969	1970	1971
Engineering	205	210	280	577	640	134	126	134	–	41
Architecture & Building	98	92	104	123	75					
Accountancy	75	11	–	–	–					
Nautical Studies	30	45	52	68	64					

Notes:
1. Figures for NATC by Faculty are not available.
2. Both the Polytechnic and NATC train students for the technicians' diploma or certificate.
3. Figures for 1970 for NATC are not available as NATC was being reorganized at that time.

ployment—an indication that students pursuing postgraduate studies are not passing time at the university because they are unemployable.

To help contain the increase of pressure for places at tertiary institutions, attempts are also made to diversify course offerings at pre-university level and thus create more drawing-off points for employment at that level. A recent study[8] of employment of graduates at various levels of the education system shows that as far as unemployment measured by length of waiting time to secure a job after graduation is concerned, pre-university graduates did no worse than Polytechnic or university students. Besides, 'at least a majority of the graduates from every school found their education relevant to their current job.'[9]

There is one important problem, however, to which Government ceaselessly addresses itself, namely, the problem of language as a factor in employment. From Clark's study it was clear that 'graduates from the Chinese streams schools of higher education reported more difficulties getting a job and more unemployment than those from the University of Singapore. . . . Graduates from the University of Singapore and from the Polytechnic were earning the highest income'.[10]

This is due in part to the narrow range of subjects offered at the Nanyang University by comparison with that at the University of Singapore and, in part, to the lack of English language proficiency generally required in the private sector of industry where firms of international origin prefer English-speaking graduates for higher-level positions. On the first point, correction is being made through the programme of the ten-year development plan. Also, an increasing number of students from Chinese streams of pre-university classes are being drawn into the University of Singapore for the study of subjects not available at Nantah. These students are, of course, those with an acceptable mastery of the English language for the purposes of study.

On the second point, all Nanyang undergraduates are required to study English in order to achieve proficiency at its use, although Nantah remains essentially a Chinese-medium university.

Physical expansion is easier to achieve in general than the expansion of human resources. In the University of Singapore, for example, full-time academic staff was increased from 285 in 1969 to 454 in July 1972. This increase had still to be supplemented by the employment of part-time teachers who now constitute about one-half the number of full-time staff. The staff-student ratio showed a steady change from 1:11 in 1962 to 1:15 in 1970. At the Polytechnic, the percentage of vacancies for academic staff was 36 per cent. in 1966. Through the institution of staff training schemes, notably that under the Colombo Plan, it improved to 30 per cent. in 1969-70. A similar staff training scheme has been instituted at the Nge Ann Technical College.

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[8] D.H.Clark, *Employment of New School Leavers*, Singapore, Economic Research Unit, 1971. (Mimeograph.)

[9] *Ibid.*, p. 26.

[10] *Ibid.*

Little has been said about the Teachers' Training College so far with respect to the demand-supply situation. As mentioned above, the problem here of quantitative pressure no longer obtains. The next decade will be a term of qualitative improvement.

Since June 1971, a new principal was appointed with a specific brief to reorganize the College. Planning and decision-making within the College have been systematized with the setting up of a Standing Committee of Heads of Departments. A training scheme has been inaugurated whereby selected members of staff, of whom less than half have received university education, may proceed for higher studies in the United Kingdom and America. The curriculum is being extensively revised and brought up-to-date. To improve teaching practice, some innovative measures have been introduced to enable school and college staff to work together as a team in the business of initiating teacher trainees into the various aspects of school life. In this respect, the concept of teaching practice is broadened to include both the activities of the classroom and others which make up the school day. Also practice is integrated with theory. Instead of a teaching-practice time-block during which students do not come to College for instruction, theory lectures continue alongside teaching practice so that relevance may be perceived and understood between what is hypothesized and advocated and what is actually possible and demonstrable.

SOME PROBLEMS OF CURRICULUM

In the foregoing discussion much about curriculum changes has been touched upon *pari passu*. While relevance of the curriculum to national and manpower needs have been rightly stressed, certain questions yet remain to be examined.

First, in the attempt to develop a predominantly technical and professional emphasis in the curriculum, to what extent has thought been brought to bear on the development of leadership in informed thinking into the problems which the nation faces, or, for that matter, those which are common in the world to-day? The sort of diet which students receive consists largely of lectures and practical sessions related to the subject of study. Even tutorials are but periods for clarification about specific issues or points of difficulty encountered in a course. What opportunities are there for thinking about ideas besides those having to do with the particular technical details of each course?

The solution does not lie in purely exhorting students to be involved in thinking: leadership has to come from the teaching staff. There will always be students who are interested in ideas. These, however, are too few and, without a process of 'deep calling to deep' between lecturers and students, may even have brands of thinking which are questionable because they have never been challenged in scholarly discourse nor submitted to incisive inquiry. It will not help, either, merely to require students of the humanities to pursue a course in scientific ideas or *vice versa*. What are important are the opportunity and quality of discourse and discussion. Perhaps thought should be given to the requirement for students in all courses to attend, throughout their study career at a higher institution, special sessions at which ideas may be freely discussed around given issues and problems.

Second, the question of course content needs to be earnestly examined. There are two practices to which curriculum planners are prone. One is to pack increasing detail into a course without discarding any matter; the other is to proliferate specialist courses related to a single subject. Both practices have their pretext in the knowledge explosion of the last fifty years. The first practice detracts from the value of a course in that students may find that much of the information is not usable and never hear of it again. Such a course, too, may have given the idea that there is nothing more to learn. Students engaged in such courses may have little time for anything else. The second practice tends to involve students in so many aspects of one subject area that the preparation they receive is eventually too narrow for mobility in the employment market. Much more thought must therefore be given to the consideration of what constitutes the essential elements of a course the principles, the central ideas which form the essence of study.

Third, with the continuing emphasis on industrialization and technology, the volume of research by academic persons into the internal affaris of industry and systems will increase. To what extent are relationships forged so that research into critical parts of the industrial process may not be hampered by the withholding of information, for example? Furthermore, what efforts are being made to feed the results of research back to industry so that universities and higher institutions may make more and more effective contributions to society?

Another question about research is its relevance to present needs. This does not cancel out the need to pursue research for its own sake to open up new frontiers of knowledge. But much of the research pursued today can hardly be called startling in its results. Creative researchers will always remain few in number. The majority of research workers may find it their lot to engage in routine evaluative research. In this respect, it is important that those in tutelage at the university should learn how to identify problems and to examine them and write them in coherent and scholarly language rather than that they should be assigned miniscule and remote topics which, by their very treatment, produce nothing more than either a repetition of what others have said or spurious information of little value.

Finally, there is the problem of assessment of student performance. There is still too great a reliance at local institutions on the results of a single examination. The system of external examinations in the name of maintaining standards seems to discourage the consideration of progress ratings which may turn out, in the last analysis, to be made useful in gauging the attainment of the individual than the single examination.

There is another aspect of evaluation which is closely related to the assessment of the end-products of higher education, namely, the assessment of the inputs and the process the objectives set for the programmes of the various departments, the relevance of the courses offered, the teaching effort. University instruction, for example, is never subject to critical assessment. It may be worthwhile to have, at each higher institution, a department whose sole purpose it is to evaluate and provide feedback on the effectiveness of lecturers and decision-makers alike. This will surely result in the improvement of the quality of instruction and in a more economical production of effort in terms of the increased gains which may be effected.

PLANNING: AN INSTITUTIONAL OR NATIONAL EXERCISE?

By and large, those institutions which are quasi-government enjoy a fair degree of autonomy in administration, but development policies have to be approved by the Government because it is the Government which underwrites all or almost all of the recurrent and development expenses of higher institutions. Inasmuch as financial controls are exercised by the Government, coordination of higher education planning with national economic planning certainly exists and is determined and effected largely by the Government.

Planning is generally at two levels policy-planning, whereby institutional planning is coordinated with Government's overall plan for the educational system as a whole and implementation planning, which remains an institutional exercise once the intepretation of policy has been made. It is not unusual for the Government to make suggestions about development measures which should be taken as, for ecample, in the request to set up an Institute of Chinese Studies at Nantah for postgraduate research in Chinese language.

HIGHER EDUCATION AND THE FUTURE

All things remaining equal, developments at higher institutions in Singapore will show a trend towards consolidation and stability at the end of this decade. The emphasis will be on quality, though there is a certain degree of unpredictability as to whether this will involve changes and improvements in instructional approaches and methods besides those in physical facilities.

By virtue of her central and strategic geographical position at the meeting point of international sea and air routes, Singapore receives many influences and has developed a capacity both as a distribution centre for important services and as a meeting place for the discussion of problems and ideas. What she offers in this dual role will enable tertiary institutions to play a more and more important part in the gathering and dissemination of ideas within the region and in the offering of training services of benefit to the peoples of neighbouring countries in order to help them overcome manpower shortages. Such centres as the Institute of Southeast Asian Studies, the Regional English Language Centre and the Regional Institute of Higher Education and Development have already begun to offer facilities for conferences and training courses. Recently, too, the Teachers' Training College has been able to play host to students from the Khmer Republic and Thailand through the giving of specialist training in certain fields. These activities will no doubt increase. The setting up of a centre for the training of technical teacher educators for the region has also been mooted.

Singapore's compactness in size, her rapid development as an industrializing and modernizing society, and the variegated composition of her people make her a natural laboratory for cross-cultural research in such fields as social anthropology, industrial and social psychology, linguistics, geopolitics, and the like. As facilities in the universities and colleges improve, the capacity for attracting scholars and scholarly research will be increased.

The future, then, holds important challenge and advantage for local institutions of higher learning. Theirs is the responsibility of rising to the challenge and making good the opportunities so manifestly abundant for quality attainment and regional fulfilment.

HIGHER EDUCATION IN A TRANSITIONAL COUNTRY PLAGUED BY COLONIALISM AND WAR: THE CASE OF SOUTH VIETNAM

*Ton-That-Thien**

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While preparing this paper, I have hesitated between three titles:

(i) 'Higher Education Development in a Country Plagued by Underdevelopment, Colonialism and War: the Case of South Vietnam',

(ii) 'Higher Education in a Country Plagued by Underdevelopment, Colonialism and War: the Case of South Vietnam', and

(iii) 'Higher Education in a Transitional Country Plagued by Colonialism and War: the Case of South Vietnam'.

My hesitation was motivated by both conceptual and methodological considerations.

Conceptually, should we speak of 'higher education development' or of 'higher education' alone when a country is plagued by underdevelopment, colonialism and, worst of all, by war? There may be no development at all in this case. There may be even regress. Second, should we view the country concerned as 'underdeveloped' or 'transitional'? The term 'underdeveloped' was used in the years just after World War II, with reference to the state of the economy essentially. In fact, 'underdeveloped' was rarely used alone, but was always preceded by 'economically'. The implication was quite clear: the unsatisfactory condition of the states concerned—mostly ex-colonial countries—was attributed to their low level of economic development, particularly to their lack of capital. (This was a time when technology, and knowledge generally, was not yet discovered as a key development factor.)

But the term 'economically underdeveloped' little by little yielded to 'underdeveloped', as the source of the new nations' troubles was traced to cultural factors, in particular, to the difficulties encountered by the peoples of these countries (especially the masses) in breaking away from their traditions. The assumption was that these traditions were not desirable—an assumption which is not necessarily true. So, the term 'underdeveloped' was once more found unsatisfactory and a new one was looked for. I think it was Walt W. Rostow who focused attention on an appropriate term, at a most appropriate time, when he talked about 'transitional' societies.[1] Thus, the problem is now viewed not only in terms of traditional, industrial, post-industrial and transitional stages, but also in terms of society instead of nation. The problem thus has become both broader and deeper.

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Methodologically, this approach is much more fruitful and challenging, especially when we look at the problem of development from the viewpoint of education. As researchers and reformers dig deeper into the problem of modernization, they have discovered that education is really the master key to the process of modernization. In other words, progress is not possible without the development of education. This is only a rediscovery of a truth which Confucius preached 2,500 years ago and which other Asian reformers Emperor Meiji's advisers and Sun Yat Sen among them had applied systematically, and which the Western statesmen, beginning with General De Gaulle, were to encounter in the late 'sixties.

I must add that while I do not leave out completely the 'traditional', I decided to pay more attention to the 'transitional' aspect as, today, there are few nations which are purely 'traditional'; instead, most are 'in the process of transition' when they are trying to meet 'the preconditions for take-off'.[2]

We can therefore view South Vietnam as a country in transition but still under the influence of a number of persistent traditions. In addition, it has been also conditioned by almost a hundred years of colonialism, and finally, it has been subjected to the consequences of almost thirty years of war under one form or another. One must have a clear grasp of the above background if one wishes to understand the problems related to the development, or lack of development, of its higher education, as well as the prospects for both the immediate and distant future. I shall therefore begin with a review of the above background.

II

Educationally, as in many other ways, 1884 was a decisive year for Vietnam. It was the year when, after having been defeated militarily by France, Vietnam was forced to accept a treaty recognizing a French protectorate over all the country and French direct rule over Cochin-china (now southern Vietnam). The immediate effect of that treaty was that, educationally, Cochin-china was removed from the control of the Royal Court of Vietnam, while the way was open for French progressive control over education in the rest of the country. This process was fully completed in 1918. What this means was the progressive elimination of a system of education which had prevailed in Vietnam for a thousand years. This was Vietnam's *national* system of education. Because it endured for so long, we can also call it *traditional* although, contrary to the practice of writers (especially Western) on modernization, I shall use the term *traditional* in a neutral and not in any pejorative or derogatory sense. In fact, I prefer the term *national*, although I shall use this term in a neutral sense also, without nostalgia or desire for apology.

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[1] The exact phrase used by Rostow was 'in the process of transition'. Walt W. Rostow, *The Stages of Economic Growth*, London, Cambridge University Press, 1960.

[2] *Ibid.*, pp. 4-6.

Vietnam has been called 'Little China' because, culturally, it bears a strong imprint of China. There should be no surprise about this, considering Vietnam's geography and its origins. What this means in educational terms is that Vietnam's *traditional* system of education, especially of higher education, was patterned on the Chinese traditional system which, as is well known, was essentially based on Confucian teachings. This system, first introduced in the eleventh century, under the Ly emperors, when Vietnam became a full national state, was developed and refined by subsequent dynasties, including the last and now defunct one of Nguyen. Under the last three French-controlled emperors of this dynasty, Dong-Khanh (who ruled from 1885-8), Khai-Dinh (1916-25) and Bao-Dai (1932-45), it became corrupted and was named 'the mandarinal system', producing mandarins for the Vietnamese court and agents of the French colonial administration.

Vietnamese nationalists, especially nationalist Confucian scholars like Phan-Boi-Chau (1867-1940), Phan-Chu-Trinh (1872-1926), and Huynh-Thuc-Khang (1876-1947), referred to the products of the mandarinal system as *hu nho* or *ngu nho* (reactionary or idiotic *literati*), and their approach to education as *tu chuong* (merely parroting chapter and verse). This was in opposition to the *chan nho* (real *literati*) whom, in their views, a really pure Confucian was supposed to produce. The *chan nho*, the true disciple of Confucius and Mencius, was the *quan tu* (Chinese: *kun-tsu*), a man thoroughly trained essentially in politics and ethics, or rather in the ethics of politics, who has passed stiff examinations of *cu nhan* (Chinese: *chu jen*) and *tien si* (Chinese: *tsin shi*) and was fit for high government positions. Such a man could be relied upon to govern well, that is, by radiating moral virtue, setting the example, and possessing deep love and concern for the welfare of the people, and thereby to maintain social peace and political stability, the first being the basic condition of the second.

The *quan tu* was the ideal. From ideal to reality, however, there is often a long way, and the system did not always or even mostly produce *quan tu*. The system produced a great many *hu nho* and *tu chuong* mandarins selfcomplacent, bookish, unimaginative, self-seeking, cowardly and corrupt. This was especially so in the decadent phases of the imperial dynasties, especially of the last three French-controlled Nguyen emperors mentioned above.

But even without decadence and French colonial control, the system was seriously deficient, even when at its best: it totally neglected economics and technology. Its scale of social values was: *si, nong, cong, thuong* (scholar, farmer, worker, merchant).[3] From the present-day view of modernization, this means turning the scale practically upside down or rather downside up. Vietnam's traditional higher system of education, *dai hoc* (Chinese: *ta hsue*), was almost totally geared to the production of good, highly-moral motivated statesmen. It has little respect or concern for what modern society calls business and technology (including war finances and war technology). It produced a breed of men obsessed by the desire to secure the highest diplomas to prove their talent and worth. But in a world dominated by business and war—today's, our 'modern world'—they would be of low, if any, competitive value because they had contempt for money and war—the warrior was not even included in the official list of social priorities.

More than nine centuries of such an education—handed down from generation to generation—was difficult to extirpate, especially when the system was found of great value by a foreign power in consolidating its domination of the country. Not only was the system maintained, but it was given a strong twist in the negative direction, i.e. with a view to producing mandarins of the worst kind and holding them up as the highest ideal for the Vietnamese society. It was a deadly trap, but the Vietnamese, conditioned by centuries to respect diplomas and titles, jumped into it like mice mesmerized by good cheese sniffing their way into a trap.

Thus, the French colonial authorities, instead of saving Vietnamese society from a perverted Confucian system by pulling that society away from a worship of diplomas and purely literary studies and diverting the attention and energies of the Vietnamese towards sound economics and technology—in other words, towards producing the business and scientific leaders and experts the country badly needed to modernize itself—did much to perpetuate the system. At the same time, politics was energetically suppressed, with the result that at the end of World War II, on becoming independent, Vietnam found itself without the honest, competent and wise leaders needed to lead their countrymen into the path of peace, stability, and progress. The results of such a situation are known to all today: Vietnam has been plagued by war and chaos for almost thirty years, and no one can be sure when this tragedy is going to end.

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[3] 'Scholar' here means classical scholar specifically, and 'worker' means technician in a broad sense.

All the evils of a perverted Confucian system compounded by colonialism compared to the evils of war would be like the dim light of a distant star compared to the glaring blaze of a sun at mid-day. War today is a disaster of great magnitude to any country. To a country like Vietnam, which badly needs reconstruction in every respect, in particular morally and intellectually, war is the worst disaster of all because war means destruction and the stopping of everything that is positive. Above all, war makes a big mockery of the efforts of educators to redress a poor and decadent society. Not only is there little money and other resources, especially intellectual resources, left for educational reforms, but existing educational assets, in particular trained manpower, are destroyed, depleted or crippled. That most valuable of all assets, faith in the future, is shattered or seriously shaken. And education is, above all, an act of faith.

Such has been the situation of South Vietnam in the last quarter of a century. The situation has become still more desperate in the last ten years, with political chaos worst than ever after the overthrow of President Ngo Dinh Diem's government and the turning of the war into an increasingly nasty and brutish enterprise of killing and destruction.

Such is the background against which one must view the problems of higher education in South Vietnam today. I have dealt lengthily with that background because without the relevant facts in mind, one cannot correctly understand the problem of development of higher education in South Vietnam today, as well as the prospects for the future. I now come to the present period.

III

The end of World War I is a good starting point. One year after the war ended, the French colonial authorities abolished the triennal Confucian examinations, thereby formally ending Vietnam's traditional system of education: no more Confucian bachelor, masters, and doctorate degrees were to be awarded. Two years after that, in 1917, the first French University was started in Hanoi under the name of 'University of Indochina'. It was not a real university since it consisted of seven *Écoles* (schools or colleges) whose aim was to train *agents techniques* (middle echelon officials or field agents), who would receive diplomas (certificates) instead of degrees. The schools were:

(i) School of Medicine and Pharmacy
(ii) School of Law and Administration

(iii) The School of Veterinarians
(iv) The Teachers' Training School
(v) The School of Agriculture and Forestry
(vi) The School of Public Works
(vii) The School of Commerce

In 1924 a School of Fine Arts was added.

The above schools were to supply the country with the 'technicians' it needed. They in fact constituted Vietnam's system of higher education at the time. It should be noted that, with the exception of the School of Commerce (which was located in Saigon), all the above were located in Hanoi, while southern Vietnam (Cochin-china) had no university or even college although Cochin-china had been a French colony since 1865 and the Cochin-chinese were French citizens. It should also be noted that the higher cadres engineers, managers, planners were French. Lastly, teaching was fully in French.

That was the technological structure (to use present day terminology) Vietnam had until World War II. Those who wanted a university education had to go to France. They were a selected few, and were given no executive positions upon their return. As a result of World War II, a few schools were upgraded, as the French Governor-General at the time, Jean Decoux, wanted to stop the French-bound movement of Vietnamese students to avoid political contamination by French ways of freedom, as the admiral so candidly explains in his memoirs.[4] Thus, the School of Medicine and Pharmacy became a Faculty in 1941; so did the School of Law and Administration. At the same time, a School of Sciences (but not a Faculty) was created.[5]

For many years the number of students was small for a number of reasons, which need not be discussed here, but which are fully explained by Doan Viet Hoat in an excellent study.[6] In 1917, the 'University' had 430 'students' (unqualified recruits); it had 395 in 1925, 552 in 1930, and 834 in 1941-2. The breakdowns show a marked preference of the students for medicine, pharmacy, and law, and a low esteem for the technical and economic subjects, especially after 1940, when the technical schools were separated from the University. In 1941-2 834 students enrolled in the three faculties of Medicine and Pharmacy,

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[4] Admiral Jean Decoux, *A la Barre de l'Indochine*, Paris, Plon, 1949.

[5] For a brief history of university development in Vietnam, see Saigon University, *Bulletin*, 1966.

[6] Doan Viet Hoat, 'The Development of Modern Higher Education in Vietnam: A Focus on Cultural and Socio-Political Forces', Ph.D. Thesis, College of Education, Florida State University, 1971.

Law, and Sciences as against 201 in all the technical schools.[7] Table 1 shows the distribution of students among schools.

TABLE 1
ENROLMENTS IN THE UNIVERSITY OF INDOCHINA

Schools	*1917*	*1925*	*1930*
Agriculture – Forestry	17	25	40
Commerce	—	42	52
Fine Arts	—	—	75
Law and Administration	115	42	17
Medicine and Pharmacy	147	100	217
Pedagogy	34	67	33
Public Works	84	96	86
Veterinarians	33	23	32
Total	430	395	552

Source: Hoat, *op.cit.*, p. 101.

Until 1935-6, enrolment in the University never exceeded 600. The 1,000 mark was reached only in 1942-3, and the highest figure under French rule was reached in 1943-4 when the University of Indochina had 1,222 students. For an underdeveloped country of 20 million people whose intelligentsia had been clamouring for *duy tan* (modernization) for half a century, that was a very pitiful figure indeed!

On the other hand, the University was 'Indochinese' only in name. In fact, it was 'no more than an oversea French University'. The University was directly attached to the Academy of Paris and its doctoral degrees were conferred by that University; moreover, until 1948, there was no Vietnamese professor on its teaching staff.[8] Vietnam's economy and its higher education were completely geared to the interests of France and had little relation to the needs of Vietnam's people.

I have dealt lengthily with the pre-war situation because this is indispensaable for an understanding of the problems of Vietnam's higher education today, as the above weakness and shortcomings, as we shall see presently, persisted not only throughout the so-called 'independent' period, i.e. the Bao Dai and Diem years of 1949-63, but are still prevalent today, and are expected to prolong into the coming decade or decades, as a result of the momentum of the system. New Vietnamese have replaced old Vietnamese, and the Americans have replaced the French, but little seems to have changed, and probably little will be changed unless somehow someone takes drastic measures to stop the present developments and channel the system into a new—and right—direction.

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[7] *Ibid.*, pp. 101-3.

[8] *Ibid.*, pp. 83-84.

When France finally conceded Vietnam's national independence in late 1949, the University of Indochina became 'University of Hanoi'. But the French Government imposed on Bao-Dai a Cultural Convention (of 30 December 1949) under which the University became a 'Franco-Vietnamese' University, with centres in Hanoi and Saigon, and with a mixed French-Vietnamese Governing Board on which the Vietnamese naturally played second fiddle. French was still the main medium of teaching except in the Vietnamese 'cultural' subjects; the curricula were still the ones applied in French universities; and the obtaining of the French title of *agrégé* in France was an indispensable qualification for a professorship. Nothing much had changed except the name of the University. This situation prevailed largely even after 1954 when, under the very anti-French Ngo Dinh Diem, the University became 'National University of Vietnam'. In 1957, when a second university was opened at Hué, the name was changed again to 'University of Saigon'.

The strongly nationalist and anti-French Diem did try to alter the situation. Among other things, he tried hard to Vietnamize the teaching staff. In this he was largely, but not completely successful; French professors were still teaching at Saigon University—and in French—when he was overthrown in 1963. In all the rest, the Saigon University remained largely a French cultural fortress, with a new wing added to it, as Hué University was in fact a dependency of Saigon University. Practically all the professors were French-trained and graduates of French universities; the curricula were little more than translations into Vietnamese of the French ones; and the methodology and spirit were French (theory, erudition, and repetition-orientated).

The so-called 'national culture' subjects were fuzzy, as they were taught by Vietnamese *hoc gia* (scholars) without proper university training in methodology. Disastrous deterioration in the command of foreign languages at both the secondary and university levels forced both students and teachers to use mimeographed *cours* (written lectures), most of them hopelessly out of date and irrelevant in the modern world: many teachers had no sense of shame in using the same tattered sheets year after year, some for ten years or more, and even if they had the desire to modify them they would not have the time, as too-low salaries forced them to do extra work so as to keep up financially with domestic servants and car drivers.

Obviously higher education on the above foundations was utterly irrelevant to the needs of a country in the second half of the twentieth century. But that is not all. Its evils were compounded by a number of other inhibitive factors: the neglect of those in power for education, the war, and the weight of American influence.

Higher education could not develop properly in a country where not only the state almost completely dominated the life of the nation, but where also those who controlled the state, the men in the highest positions politically or economically, had no need for a really good system of education, especially of higher education, as they could send their children abroad to good and expensive foreign universities. For reasons of political expediency, the universities had to be established, their expansion and improvements talked about. But the minds and hearts of those in commanding positions were not there. In other words, they did not *really* care. Thus, the so-called national universities, institutes of higher learning or technical institutes, were really for second-class Vietnamese, the sons and daughters of people without power or money.

One need only take a casual look at the residence of the so-called Vietnamese 'elite', their offices, and the universities in Vietnam to be struck by a deeply shocking contrast between the availability of so much riches and the unavailability of a good system of education. Visit any university, then a bank or a high government executive's office, and you will realize why Vietnam is trailing behind other Asian countries in modernization, and how Vietnamese higher education seems so utterly irrelevant to the urgent needs of the country.

This lack of relevance is also reflected in educational statistics. But here, apart from the poverty of the institutions of higher learning, one must take into account the war and the need for young men graduating from high schools (with their full baccalaureate) to be registered at an institution of higher learning (and to make their grades every year) to avoid being drafted into the army, if their parents are not powerful and rich enough to get them out of the country, out of the reach of the army and into the better foreign universities. (Why young men seek to avoid the draft by all possible means is a question outside the scope of this paper.) Table 2 below shows the contrast between growth in numbers and quality. The wastage rate is excessively high. In other words, the higher educational system of Vietnam is a great waste of national resources in terms of results. It should be noted also that the proportion of students reading law and letters is excessive for a country which needs modernization, i.e. more technology.

To the above figures one should add the number of students officially listed under the heading 'Technical, Artistic and Professional Education'.

TABLE 2

STUDENT ENROLMENT AND NUMBER OF GRADUATES*

Year	*Total*	*Law*	*Medicine*	*Sciences*	*Letters*	*Pedagogy*	*Pharmacy*	*Dentistry*	*Architecture*
1956-7	5,315	1,010	607	1,170	838	166	318	92	114
	161	57	29	13	12	—	47	—	3
1960-1	12,616	2,556	1,017	3,383	3,162	630	1,281	179	408
	514	97	66	26	44	166	58	22	36
1965-6	26,441	6,636	1,346	5,383	7,876	998	2,717	14	431
	1,069	223	144	87	142	358	96	16	3
1966-7	32,817	8,676	1,378	6,205	10,083	1,421	2,880	172	924
	287	106	97	176	52	134	114	10	8
1968-9	37,887	11,509	1,682	7,750	11,911	1,562	2,264	239	554
	1,774	412	179	180	237	533	236	23	4
1969-70	46,022	13,711	1,652	7,721	16,273	2,038	2,112	266	689
	1,924	154	251	200	282	563	307	31	31

Sources: Saigon University, *Bulletin*, 1966, p.34; and Republic of Vietnam, Ministry of Education, *Educational Developments 1968-1970*, 1970, pp. 52-53.

* In the table, upper figures show enrolments, lower figures graduates.

Their combined numbers for the period 1960-9 are:

TABLE 3
STUDENTS IN TECHNICAL SCHOOLS

Year	*Students*
1960-1	1,014
1961-2	1,074
1962-3	882
1963-4	1,067
1964-5	1,969
1965-6	1,734
1966-7	1,545
1968-9	1,593

Source: Republic of Vietnam, National Institute of Statistics, *Vietnam Statistical Yearbook 1970,* p. 136.

The following breakdown for 1968-9 gives an idea of the relative importance of the various schools:

TABLE 4
NUMBER OF STUDENTS IN TECHNICAL SCHOOLS, 1968-9

National Institute of Administration	525
Advanced School of Public Works	158
Advanced School of Electricity	116
Advanced School of Chemistry	30
Advanced School of Agriculture and Forestry (Saigon)	349
Advanced School of Agriculture and Forestry (Cantho)	43
National School of Engineers of Industrial Arts	135
Advanced School of Fine Arts (Giadinh)	156
Advanced School of Fine Arts (Hué)	81
Total	1,593

Source: *Vietnam Statistical Yearbook 1970,* p. 136.

The combined number of graduates from the Vietnamese universities and technical schools are ludicrously low for a country of 17 million people (i.e. South Vietnam alone). It is no surprise that the country had to import thousands of foreign experts (30,000 of all kinds) under the USAID programme between 1965 and 1968 for the implementation of various technical projects. In other words, the higher educational institutions of Vietnam were practically irrelevant to the modernization needs of the country.

Meantime, there are some 10,000-15,000 Vietnamese students abroad. Nobody knows for sure how many of them there really are because many have left the country illegally or have not bothered to report to the Vietnamese embassies. According to Ngo Khac Tinh, Minister of Education, there are 7,000 students abroad, of whom 5,780 are listed as 'regular', i.e. fully authorized, and 1,500 as 'irregular'. In addition there are 3,000 'unauthorized' (they left the country illegally or have refused to return on government order).[9] Those who have chosen to come home and work are only a trickle. Instead, many are known to work as private doctors, pharmacists, economists, engineers in foreign countries (especially in France) or as technical experts in the foreign aid programmes of France and the United Nations organizations in underdeveloped countries.

It is no surprise that the contribution of Vietnam's higher educational system has been small. An official publication of the National Council on Education acknowledges that in 1969 the whole country had only 800 doctors, 1,000 engineers and 200 lawyers for a population of 17 million people, and each year Vietnam produced only 130 doctors, 250 pharmacists, 125 bachelors of science, and only 1.6 per cent. of those attending secondary schools could continue on to the university. On the other hand, the proportion of failures in the universities were extremely high: 45 per cent. in the technical schools (Pedagogy, Medicine, Pharmacy, Dentistry, Technical schools), 96.6 per cent. in the faculties of law, and 98.2 per cent. in the Faculty of Letters. Many students spent seven or eight years on a first degree requiring only three to four years' studies.[10]

The man who gave the facts mentioned above, engineer Tran Luu Cung, was none other than the Vice-Minister of Education. He had this comment to make:

> If this period of schooling is too long even for urban children, how could the children from the rural areas, whose incomes are lower, manage? Thus,

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[9] *Chinh Luan*, 8 August 1972.

[10] Tran Luu Cung, 'Education, Technology and Manpower' in Hoi Dong Quoc Gia Giao Duc (National Council of Education), *Ky Yeu* (Summary Report), May 1969, pp. 39-41.

> until today, our education has concentrated on an insignificant minority. Those who are neglected are nearly 100%: those who have to give up their studies, those who are neither trained to have a profession nor have been taught elementary knowledge to solve the daily problems of life. This is not only a waste of manpower, but a greater danger psychologically. Indeed, in the competition for diplomas, those who succeed are only a very small minority, and one socially privileged; hence they are arrogant, and think only of making the best for themselves instead of maximizing their creative efforts and help in social development. Those who are defeated, if they do suffer an inferiority complex, will be discontented and dissatisfied with the existing social arrangements. Both attitudes are detrimental to the progress of society.[11]

One of the main reasons for the high rate of student failure—and hence manpower wastage—is the lack of educational facilities (campuses, classrooms, laboratories, teaching aids, etc.). This is due partly to government neglect and partly to insufficient budgets. But there is another very important factor which is only a consequence of the two just mentioned: shortage of professors. The following figures speak for themselves:

TABLE 5
NUMBER OF STUDENTS AND PROFESSORS

Year	*Students*	*Professors*
1959-60	9,010	394
1960-1	11,419	862
1961-2	15,105	494
1962-3	17,419	537
1963-4	20,355	595
1964-5	23,662	491
1965-6	28,113	605
1966-7	32,462	741
1967-8	35,043	703
1968-9	40,831	925

Source: *Vietnam Statistical Yearbook*, pp. 132-3.
The above figures do not include double, triple, or even quadruple counting, as many professors, out of sheer struggle for survival, have to teach in more than one university. The figures include both full-time and part-time professors.

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[11] *Ibid.*, p. 43.

The shortage of professors is due to many factors, the two main ones being the draft and low pay in Vietnam which keep many abroad after graduation. The low pay is in turn due to the small budgets for education, as can be seen from Table 6.

TABLE 6
EDUCATIONAL BUDGETS OF VIETNAM
(in VN$ Million)

Year	*Total National Budget*	*Budget of the Ministry of Education*
1962	22,018	1,175
1963	25,890	1,348
1964	28,856	2,387
1965	47,780	2,239
1966	64,010	2,298
1967	86,190	4,293
1968	110,840	4,909
1969	138,049	6,194
1970	195,562	8,367
1971	267,000	13,108
1972	294,786 (364,000)*	17,432

Source: *Vietnam Statistical Yearbook 1970*, p. 273, and Directorate of Budget and Foreign Aid, 'National Budget for 1972', pp. V and XIX.

*Later, corrected figure.

With such small educational budgets, it is naturally impossible to attract qualified teachers either by inducing them to come home (aasuming that the draft law is modified) or to attract local high-calibre graduates to teaching, or to encourage them to teach in one university only and do a full-time job there.[12] Since professors cannot devote their full time to teaching and researching, this is reflected in the low quality of the students, and through them, in the low level of development of the country.

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[12] A full professor in Vietnam earns (as of September 1972) an average of VN$30,000 per month, i.e. less than US$100 at the current rate of exchange (VN$425 to US$1).

IV

In the previous pages, we have left out the administrative aspect. We should now say a few words about it. There are at present seven universities in Vietnam; three state and four private (three of these founded since 1964).[13] Whether private or state, these universities are subject to the jurisdiction and administrative control of the Ministry of Education. This control is extremely tight in the case of the state universities, especially in budget, appointment, promotion and curricula. This makes reforms practically impossible, and the state universities have became frozen and hopelessly out of date hence largely irrelevant to the development needs of the country.

The private universities enjoy greater freedom, but only in administrative matters. In matters of curricula and academic structure, they are subject to the control of the Ministry of Education. However, this control is loose enough to allow them to innovate, at the risk of being disavowed by the Ministry. But the private universities are greatly handicapped by lack of funds. Government grants are small or unavailable.[14] The students are the poor remnants of Vietnamese youth (as pointed out above, the rich who can afford high fees go abroad); and for the reasons already given earlier, the powerful contribute little, and the rich nothing, to the development of the country's higher education.

As illustration of the above difficulties, let me take the case of Van Hanh University which I know best. (But the other private universities like Hoa-Hao and Minh-Duc are in a very similar situation.)

Before 1964 there was only one private university, Dalat. The latter was founded in 1957 by President Ngo Dinh Diem's brother, Bishop Ngo Dinh Thuc. It was therefore a Catholic university, closely associated with the Diem regime politically, and received every possible help from the government—materially, financially and administratively.

In 1964 Van Hanh, the first private Buddhist university was founded. It grew out of the Buddhist College. It owed its birth to two facts: (i) the Buddhists emerged to active national life after several centuries of eclipse and emerged as the victor in a political struggle, and (ii) in 1964 the Buddhists were very powerful and had several men in the government, one heading the Ministry of Education and another the Ministry of Public Works. The first gave the university its charter and the second a four storey building (for a nominal rent of VN$ 1 per year). That was Van Hanh's best year: for the Buddhists very rapidly lost their power, and by 1967, they ceased to really count. This naturally influenced the position of Van Hanh University. From now on, it was on its own.

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[13] State universities: Saigon (founded 1955), Hue (1957), and Cantho (1965). Private universities: Dalat (Catholic, 1957), Van Hanh (Buddhist, 1964), Hoa-Hao (Hoa-Hao religion, 1970, at Long-Xuyen), Minh-Duc (Catholic, 1970, at Saigon) and Cao-Dai (Cao-Dai religion, 1971, at Tay-Ninh).

[14] Van Hanh University, for example, with 3,500 students received VN$ 20 million in 1971 compared with VN$ 350 million given to Hué University, a state institution, with some 3,200 students.

Van Hanh, fortunately, under the wise leadership of its rector, Thich Minh Chau, continued to grow. The main reason for it is that, from the beginning, Minh Chau fought hard to keep politics out of the university. On the other hand, he looked for ways to make the University contribute to national development instead of thinking within narrow religious terms. In 1967 he hit on the right idea: to a dwindling Buddhist Faculty and a stagnant Faculty of Arts he added a Faculty of Social Sciences. The Asia Foundation offered some financial help in getting the Faculty started. This not only saved the University from collapse but it also marked the beginning of its vigorous growth, thanks to the increase of its student size whose fees were used to cover overhead costs in the absence of adequate outside support. Table 7 shows that growth:

TABLE 7
ATTENDANCE AT VAN HANH UNIVERSITY

Year	*Total*	*Buddhist Studies*	*Arts*	*Social Sciences**	*Language School*
1964-5	696	520	176	-	-
1965-6	488	350	138		
1966-7	805	250	216	-	366
1967-8	1,988	216	192	1,190	390
1968-9	2,478	109	520	1,321	579
1969-70	3,097	108	525	1,584	900
1970-1	3,950	150	600	2,000	1,200

Source: Van Hanh University, *Van Hanh Bulletin, January-February 1970*, p. 33.

*Economics, Commerce, Politics, Sociology, Anthropology. In 1970-1 a Faculty of Education was added.

The largest department of the Faculty and indeed of the University, since 1967, has been that of Commerce, followed by Economics. The establishment of a Faculty of Social Sciences, the first in the history of Vietnam's education, was indeed a positive contribution to the country's development needs. This has been amply proved not only by the enthusiastic response of the students, but also of the employers both government and private. There was such dearth of trained personnel in the economic and commercial sectors that all the 200 graduates of the Faculty's first class (1971) found employment within three months of their graduation. The same is also happening to the second class (1972).

Yet the University leadership could not feel satisfied because it wanted to give the students a better training but lacked the means for it. It could not improve material facilities and provide more space because it could not find any support Vietnamese Government, USAID, the Buddhist church, or private foundations[15] or individuals for expansion of building. Not only do students sit in cramped auditoria (600 in a 300-seat capacity auditorium) and the staff in small offices, but there is also not enough money to pay teachers and personnel adequately, to purchase much needed teaching aids (amplifiers, maps) and office equipment (mimeograph machines, photostat machines, or even typewriters) or to provide office space for professors (there is no common room and no private individual offices for professors).

Of course, there is the possibility of raising fees. But, as already pointed out, the students are very poor and there is a limit to escalation. The fees were raised from VN$800 a year in 1967-8 to VN$7,000 in 1970-1, to VN$11,000 in 1971-2, and again to VN$14,000 in 1972-3. But this is really squeezing the students hard and the University Council does not feel happy at all about it.[16] The Government grant of VN$20 million has remained unchanged although prices have risen at least 300 per cent. in the last two years. Unless the fees are raised, staff and teachers are bound to leave the University[17] and other plans cannot be implemented (building of more classrooms, for example).

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[15] Only the Hazen Foundation gave US$ 50,000 for a student centre. Both the Asia Foundation and Ford Foundation flatly turned down requests for help in the construction of more classrooms; the director of USAID cultural section, Earl Moshall, gave US$ 50 out of his own pocket.

[16] By international standards, this is extremely low. VN$14,000 amounts to about US$30 at the present rate of exchange.

[17] A clerk is paid only VN$10,000 (US$25) a month. The highest member of the administrative personnel is paid VN$20,000 a month (US$50), a regular professor VN$35,000 (US$80), and a dean VN$40,000 (US$100). A professor from outside gets VN$800 (US$2) per hour of lecture.

Administratively, the University is under the jurisdiction of the Ministry of Education, and the establishment of new faculties, the curricula, the organization of examinations, and conferment of degrees must be approved by the Ministry. This rule has not been very strictly enforced, however, and this has permitted the University to undertake the necessary reforms, innovate, and make rapid progress.

Yet considering the above obstacles, there are obvious limits to what the University could do, and unless the Government modifies its policies with regard to the draft, financial support to private universities and relaxation of administrative control, the contribution which Van Hanh University could make to national development would be limited, no matter how much goodwill the leadership of the University may have. What is true of Van Hanh University is true of all the other universities, whether public or private.

Of course, there is always present the danger that freedom would be abused by irresponsible rectors and heads. But this danger could be easily obviated by laying down precise criteria regarding administration (especially finance, a very important question in a corruption-ridden country), curricula, and academic standards. This can be left to an Inter-University Council which would work under the general supervision of the Ministry. Or simply, the universities should be left to take their chances, and compete in maintaining and raising standards. The best judges would be the employers of the students graduated from the universities. Indeed, this is happening now, and for the first time, in Vietnam.

One last aspect of the development of higher education in Vietnam deserves mention. It relates to the impact of the United States, especially in the post-1965 period when Americans practically took over Vietnam, not only in military matters but in every field including education. Doan Viet Hoat writes:

> It is not an exaggeration to state that the Americans have monopolized all major educational changes in South Vietnam. American education teams have penetrated all aspects of Vietnamese education. In addition, these advisory teams have been exclusively composed of 'experts' from American universities; Vietnamese scholars play no major part in these study teams. Also most study teams stay only briefly in Vietnam, of which period a major part of the time is spent on studying the situation in Vietnam. As a consequence, most of their observations are established facts for many Vietnamese educators. In addition, their recommendations for improvement are generally stated and drawn heavily from American experience without

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[18] See Hoat, *op. cit.*, in particular Chapter IX, 'Higher Education in South Vietnam: Impact of American Aid'.

> any serious consideration of the cultural and historical background of Vietnam. Such a consideration requires a long acquaintance with Vietnam and an insightful understanding of Vietnamese culture and history. Also, many of their recommendations are rigid and detailed and may become obsolete or impractical in the events of new political and social developments.[18]

Few Vietnamese would quarrel with the above statement. America is moving towards a post-industrial stage whereas Vietnam is only on the threshold of take-off; what is good for America is not necessarily good for Vietnam, at least in the short and medium runs. In fact, it may tear the Vietnamese social fabric to pieces.

What Vietnam badly needs at present is a restoration of the moral foundations of Vietnamese society. But the American advisers think exclusively in terms of techniques and administration, and they are pushing educational reforms in Vietnam in the direction of economics. Not that economics is not needed by Vietnam. But that is secondary. What Vietnam needs most at present is an ideal capable of inspiring people to reconstruct their society and build a new world. The Americans have been consciously or unconsciously, teaching the Vietnamese to behave like people of a consumption, individual-orientated, and permissive society. This is something Vietnam cannot afford.

What Vietnam badly needs an ideal America cannot teach the Vietnamese, still less impose on them. The Vietnamese must find out for themselves what is good for Vietnam. Americans cannot set aims for Vietnamese, whatever those aims may be, and however desirable they may be to Americans. America's ideals are not necessarily Vietnam's ideals. America's ways are not Vietnam's ways. The Vietnamese must find their own path and pace of modernization. America can supply the tools, but not the aims.

It is fitting to conclude this study with another quotation from Doan Viet Hoat, who spent years in the United States and earned a Ph.D. in Education there. He has this to say about American efforts to Americanize Vietnamese education.

> . . . if it is true that American educational advisers in South Vietnam do not intend to impose an American solution on the problems of Vietnamese higher education, as many of them have constantly stated, one is afraid that their practices have betrayed their intentions. By monopolizing educational changes through exclusively American advisers and through exclusively American experience, American educational programmes have induced changes in the form of American-style higher education. Although these changes might be necessary and desirable in the short run, in the long run it is doubtful whether they will contribute to the development of a

Vietnamese and not American overseas university system.[19]

Substitute France for America and we are back to the problems with which several generations of Vietnamese have tried to grapple: how to get rid of foreign cultural domination and give Vietnam a truly Vietnamese system of higher education reflecting Vietnam's cultural and historical heritage, and responding to Vietnam's political, economic, and social needs, so as to fit Vietnam for a safe and happy life in a modern and fast modernizing world.

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[19] *Ibid.*, p. 28.

GENERAL PROBLEMS AND ISSUES OF HIGHER EDUCATION DEVELOPMENT IN INDONESIA

*Selo Soemardjan**

When the Indonesian Minister of Education and Culture in March 1972 presented an outline of his policies to a meeting of high-level administrators in his department, he started with a brief summary of the general sources of problems of education in the country. Four sources were mentioned: (i) the heritage of a multi-system of educational administration in the country, (ii) mounting pressures and demands for education due to population explosion, (iii) shortage of qualified manpower, funds and facilities, and (iv) obsolete system of education.[1]

Although the Minister was referring to education at all levels, his remarks on the four sources of problems have a particular relevance to higher education. While the first applies only to Indonesia, and only to some extent to other countries in Southeast Asia, it seems that the other three sources are to a large extent being shared by other countries in the region.

With regard to the multi-system of educational administration, there is no doubt that the Minister of Education and Culture is fully in charge of and responsible for higher education in general, which includes universities and institutes in specific fields like technology, agriculture, and training of high-school teachers. However, in the course of the rapid extension and development of government activities in many instances not well planned or not planned at all it was felt by many cabinet ministers that general higher education was both too general in scope and too time-consuming. Each government agency on the national level was in dire need of a special type of education, actually vocational in nature, which would serve the special requirements of work in each ministry of other government agency. As a result, more than one hundred colleges came into being, each financed and run by a specific ministry or branch thereof and quite independent of the Ministry of Education and Culture. Academic degrees were conferred or not conferred on the college graduates, all at the discretion of the sponsoring government agency, thereby causing a bewildering multiplicity of degrees to be recognized and honoured by the Government in determining the position and salary of the graduate students when he enters government service.

Considering the scarcity of funds, buildings, equipment, and qualified teaching manpower, it is fair to say that this multi-system of education does not qualify for the efficient use of existing resources. The present wave of rational and economic thinking which is gaining ground in government circles has created a pre-planning conclusion that it would be in the interest of efficiency and effectiveness for all the parties concerned if the policies and management together with the necessary budgets for higher education could be pooled together in the hands of the Minister of Education and Culture. A grand total of something like 25 per cent. of the entire state budget could then be utilized with less waste but with higher quality output as compared to the meagre 4 per cent. now controlled by that Minister.

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[1] The sequence of the four sources has been changed for convenience in this paper.

To meet the needs of specific agencies of the Government as well as of private business, a special in-service training arrangement for employees can always be made by whosoever feels its necessity. Special training for entrance into an individual office, however, should no longer be tolerated to compete with the formal type of higher education in general.

POPULATION PRESSURES

One of the general problems felt in Southeast Asia seems to be that the mounting pressures and demands for higher education as a result of population explosion everywhere require a serious and systematic study by the best experts on the subject to arrive at a bold and imaginative concept which, for all purposes, has to be feasible—financially and logically—in offering more and better educational services to the incessantly growing desires of increasingly sophisticated societies.

More and better education in response to an increasing population is certainly justified, since in this age of science and technology it is the moral responsibility of every society to offer every individual the chance to acquire the basic knowledge and intellectual skill he needs to survive socially and economically, and to find his way ahead. But if it comes to university education some selective measures have to be applied.

Higher education is a costly affair, particularly for a less developed country which cannot afford the luxury of financial waste. For higher education to be effective, socially and economically, admission of students should not be arranged on the basis of a high school diploma only. An entrance examination should select for enrolment only the best intellectually capable candidates.

The development of higher education should also keep track with economic development. It should, in terms of graduate output, only be a few years ahead of manpower requirements so as to avoid excessive and therefore socially and politically dangerous intellectual unemployment. Manpower planning, however difficult to arrange correctly in a developing country, is imperative if the unplanned growth of higher education is not to create its own self-destroying powers. As a matter of fact, selective entrance into the university also facilitates the increase of quality of education because of more effective control of the smaller number of students. This policy of selection and limitation should stand criticism against elitist trends in higher education because of its greater effectiveness both on the financial and social level, and consequently because of the better service the university graduates can offer to the development of the country.

Of course, this policy should not be pursued in isolation from the problems it has given birth to. What is to be done with high-school graduates who have been denied entrance into the university?

One of the answers is to open the possibilities for them to get a job. But jobs in a developing country are scarce, even if the high-school graduates are not choosy for prestigious white-collar jobs. Another logical solution is to open vocational schools, but these will have to be consistent with the economic and other developments of the country. In this way, the students will be better equipped with special skills to enter the labour market.

There is in general a greater need for medium-level technical and clerical skills in a less developed country. Unskilled labour is without any doubt in abundance. At the same time, high-level positions which require university training are saturated or, in some cases, nearly saturated. Consequently, there is a big gap to be filled in between the unskilled level and the university-trained. There are a few reasons why this middle level of skills is suffering from a scarcity of supply in manpower. People who can afford education aim at white-collar positions, preferably with the government. This attitude stems from the high prestige of a government job where one can share public power. Vocational training which leads to less prestigious positions is therefore less preferred, even if it opens the way to a better material living.

But even if there are enough candidates for vocational education there are not enough institutions for that purpose. Vocational schools, particularly in the field of technical skills, are expensive because of the need for training equipment. Well-experienced and qualified instructors are scarce, and without them the schools cannot operate. But whatever the difficulties, if a developing country is serious in its development efforts and realistic in its programme, it can find ways and means to remedy this deficiency.

The traditionally negative attitude of people toward vocational training and non-white collar jobs has changed considerably in big industry centres like Singapore, Djakarta, Bangkok, Kuala Lumpur and Manila where there is equal opportunity, if not more, of employment in industries and business than in government. Prestige in these cities is no longer measured with the yardstick of public power only; financial income and material wealth have developed in time as a high social value.

When discussing admission problems to universities in less developed countries, there is no escaping from discussing the comparison and relationship between state and private universities, at least where the latter exist in a less developed country.

STATE UNIVERSITIES

Leaving aside the institutes for teacher training, Indonesia has as of 1972 a total of twenty-nine state universities and institutes spread out over the twenty-six provinces in the country. Partly yielding to pressures from local communities the Government made it a point to build at least one state university in each province.[2] Recognizing the fact that in the Republic of Indonesia public power was primarily in the hands of the educated group, the local communities in the provinces were grateful that through the universities every citizen was given an equal chance to enter that group and share in the power of the state. In this context it should be mentioned again that in a developing country like Indonesia and others in Southeast Asia, the Government is not only the principal and largest employer, but also the most prestigious employer.

It is therefore understandable that the local, but state-financed and state-managed, universities constitute an effective instrument to generate and maintain a sense of loyalty to the central government, and in that way also exercise a unifying effect in the great diversity of ethnic groups in the 13,000 islands in the country. At the same time, local universities work as a powerful stimulus to the development of education in the province. It must be admitted that the rapid proliferation of elementary and high schools in the provinces is primarily an expression of the sudden popular upsurge for education which finds its roots in the proud awareness of independence after 1945; but without the proximity of universities, the rate of educational development would certainly be much less rapid and widespread than it was.

Independence, so people imagined, includes the obligation and also the opportunity to become equal in every respect with other countries in the world. For the individual it means that after centuries of suppression the way is finally opened to climb to the top of the social hierarchy, and the way of this is through the university. A survey in 1962 to find out the people's expectations of the future in villages in West Java revealed that parents were willing to make sacrifices for the education of their sons and daughters, and that they would allow their children to obtain the ultimate of education within their financial limits and that of their children's intellectual capability. This survey also showed that in the minds of the village population the intellectuals, particularly those with academic degrees, were the modern nobility in the country.

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[2] The province of Bengkulu in Sumatra was inaugurated only in 1971 and has as yet no university.

When evaluated for effectiveness by professional educators, however, the local state universities exhibit a wide variety in their degree of success. There is no doubt that every university suffers chronically from financial deficiency, yet some universities can produce annually more and better scholars than others. The principal reason for this difference is that for a large part academic output is due to the different social environments in which each university is located. Without sympathy and effective support from the surrounding community, there is only little chance for a university to operate successfully. To mention some of the social factors which contribute to the sound operation of an institution of higher learning, one could point to the number of high schools as a source of prospective students, to a community with enough educated individuals for recruitment as teachers, to an economic level of the population which is high enough to pay the students' expenses, and to an intellectual atmosphere which can aid communication between teaching staff and students.

Table 1 shows the comparative results of operation in 1967 of three of the largest universities on the island of Java and three typically small universities on other islands.

The University of Gadjah Mada is located in the city of Jogjakarta, for centuries the centre of Javanese culture, and since pre-war time, a favoured place for education on all levels. From 1945 to 1950, it was the capital of the Republic when the country was violently engaged in revolution to defend its independence and to build a new nation. Because of its population density, economic prosperity is on a relatively low level.

Padjadjaran University is in Bandung, West Java, surrounded by an area of high-yielding rubber and tea plantations as well as fertile rice fields. The Bandung community is sophisticated and provincially progressive.

The University of Indonesia in Djakarta (the metropolitan capital city of the country with a population of 5,000,000 including a sizeable foreign business and diplomatic community) has a student body which is representative of the major ethnic groups in the Republic. As the nation's gateway to the world, the city has a global orientation in its development.

The three other universities, Sam Ratulangi in North Sulawesi, Lambung Mangkurat in South Kalimantan, and Mataram on the island of Lombok, east of Bali, have been selected for their contrast with the largest universities in Java.

TABLE I

STUDENT NUMBERS OF THREE LARGE AND THREE SMALL STATE UNIVERSITIES IN INDONESIA IN 1967

	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year
Large Universities						
Gadjah Mada	6,009	3,844	3,159	2,593	1,241	189
Padjadjaran	3,548	1,934	1,550	1,449	925	244
Indonesia	3,183	1,338	1,351	1,052	886	145
Small Universities						
Sam Ratulangi	1,424	491	488	296	74	32
Lambung Mangkurat	972	204	185	147	60	—
Mataram	114	116	33	21	—	—

Source: Directorate General of Higher Education, Department of Education and Culture, Indonesia.

Table I shows the decreasing number of students in the six universities, starting from the first to the last academic year. To avoid any misunderstanding, it should be pointed out that the sequence from the first to the sixth year does not present a running process. However, it gives a comparison of the number of students in each academic year in 1967 and an idea of how many students entered the universities and how many of them reached the end of their study. Unfortunately, no data are available on the number of students graduating.

Judging by the number of students in their first year as compared with those in their second year, it is obvious that there is a large percentage of drop-outs between the first and the second year of study in all the universities. Except for Gadjah Mada, the decline from the second to the fifth year is not too sharp. It should be understood that universities in Indonesia have in general a five-year programme of study except for the faculties of medicine and technology which require one more year. The relatively small figures in the sixth year is due to the fact that they include the faculties of medicine and technology only, while the figures in all other years represent the number of students in all faculties including the two mentioned.

The figures of the fifth year as compared to those of the first year show the following percentages:

University	*Percentage*
Gadjah Mada	20
Padjadjaran	26
Indonesia	28
Sam Ratulangi	5
Lambung Mangkurat	6
Mataram	0

The differences among the operational results of the three universities in Java are not very significant, neither are they among the three universities outside Java. But the differences between the universities in Java and those outside Java are striking indeed. If we look for reasons which account for these differences, we may consider the following as relevant.

The community of Djakarta, served by the University of Indonesia, is financially on a higher level than the rest of Indonesia. Parents of students can better afford to finance their children through the entire period of their academic study. If for some reason a student has to take a job to make up for any financial shortages, it is relatively easier for him to find some additional income in Djakarta than elsewhere.

On the other hand, per capita income outside Djakarta is generally lower, particularly in the surrounding areas of the three small universities taken here as examples. It is a known fact that certain parts of the island of Lombok, the island where Mataram University is situated, face food problems during the dry season of the year. In such an economic situation one can hardly expect to have the community contribute financially towards the university.

It should be mentioned here in passing that in Indonesia the law decrees free education on all levels, including the university, but public funds for education are always so scarce that no educational institution can survive without other sources of finance. The inadequacy—quantitatively and qualitatively—of the teaching staff in relation to the number of students is another reason for these differences.

Table 2 gives a numerical picture of the problem. The number of students per teacher is as follows: (professorial and non-professorial)

Gadjah Mada	12
Padjadjaran	6
Indonesia	5
Sam Ratulangi	4
Lambung Mangkurat	7
Mataram	4

TABLE 2

NUMBER OF STUDENTS AND TEACHERS IN UNIVERSITIES IN AND OUTSIDE JAVA, 1967

University	Number of students	Professorial and non-professorial teaching staff			Professorial teaching staff		
		Part-time	Full time	Total	Part-time	Full time	Total
In Jawa							
Gadjah Mada	17,035	945	527	1,472	46	35	81
Padjadjaran	9,650	739	715	1,454	44	12	56
Indonesia	7,955	461	1,017	1,478	44	43	87
Outside Java							
Sam Ratulangi	2,805	448	269	717	21	2	23
Lambung Mangkurat	1,568	193	51	244	3	0	3
Mataram	284	60	6	66	0	0	0

Source: Directorate General of Higher Education, Department of Education and Culture, Indonesia.

It seems from the figures that there is no relationship between the student: staff ratio and the quantity and quality of graduate output. If that relationship were to exist then Gadjah Mada would be the worst off and Sam Ratulangi and Mataram the best in terms of graduate output. Even the size of the professorial teaching staff, which very often is used to measure the academic quality of a university, can hardly be considered a valid reason for the difference in the number of unsuccessful students.

If we look, however, at the number of part-time and full-time members of the teaching staff, particularly on the professorial level, then the differences become more obvious. As a matter of fact, the designation part-time and full-time is misleading because both categories of teachers have in most cases other jobs outside the university. The salaries of university professors and other teachers in Indonesia are so extremely low that for the overwhelming majority it is an unavoidable necessity to take other jobs to keep their households running, unless the wife or husband earns enough elsewhere to allow the university lecturer to dedicate his or her time fully to university teaching and research.

Full-time teachers are those who have their bureaucratic base of employment at the university. They usually have a side-line job which pays them more or less than their salary at the university. The part-time teachers are those basically employed outside the university, either in the government or in private business. To them teaching at the university is a secondary activity. Some of them teach to obtain additional income, which is actually very insignificant, but most do so because affiliation with a university is prestigious. Others teach part-time in the university in order to develop their intellectual capability and at the same time help develop higher education in the country.

The status of 'part-time' or 'full-time' does not in any way indicate the degree of involvement of the teacher in university work. This generally depends upon the motivation of the teacher toward teaching. Satisfaction in academic work generally is the strongest motivation for one to dedicate his time and energy to the university, much stronger than prestige or financial gains.

The figures in Table 2 show clearly that only the University of Indonesia in Djakarta can boast of having more full-time than part-time teachers. All other universities, located either in Java or outside, have more part-time than full-time teachers. This unfavourable situation becomes even more unfavourable the farther away a university is located from Djakarta. As one critic has said, 'Teachers of the University of Indonesia have to get extra-university employment to help themselves survive. Government dignitaries in the provinces have to take up intra-university teaching to help the university survive.'

To do justice to Indonesian universities, it should be mentioned here emphatically that the six universities selected as examples in this paper have been chosen from both ends of the spectrum. In-between there are twenty-three more universities with varying situations with regard to their teaching staff and student body.

PRIVATE UNIVERSITIES

With respect to private universities some specific aspects call for attention. Their number in 1971 amounted to almost seven times the number of state universities, teacher training institutes included. In absolute terms, there are 40 state-financed institutes of higher learning (29 universities and institutes of technology and 11 institutes for teacher training) as against 279 private universities and institutes of teacher training. There are in fact more than 279 private universities because some universities, registered with the Ministry of Education and Culture under one name, have branches in other places with an independent day-to-day management, teaching and administration. Including the branches, the total number is 322. It is most interesting to note that out of the 279 private institutions of higher learning, four were organized and put into operation before the Republic of Indonesia obtained international recognition as an independent and sovereign state.

The period of 1950-60, marked with widespread armed insurgence from dissatisfied political groups while the country was plagued with incessant conflicts between political parties, saw 64 new private universities and other institutions of higher learning coming up. It seems that popular demand for higher education does not suffer much from political and economic instability, for the years 1960-9 brought about 199 of them with an additional 12 in the year 1970. It is widely known that the period of guided democracy from 1959-66 was characterized by its great zeal for revolutionary changes on all levels, causing by its very nature continuous and wide-spread political and economic instability. Proliferation of the number of private universities on the private level continued also after 1966 when the new government under General Suharto was successful in establishing political stability, followed by even more successful economic restoration and development.

The facts and figures justify the opinion that the termination of colonial foreign dominance, which purposely suppressed the desire for more and better education for the people, and subsequent political independence with a national government which favours democracy and development, are most significant as stimuli for the rapid increase of private universities and other comparable institutions, irrespective of whether or not there is an atmosphere of political, social, and economic stability. Problems of stability and instability may be of influence with regard to the quality of higher education, but they seem not to have any deterring effect on the numerical growth of institutions of higher education.

State universities in Indonesia are generally considered to be of higher academic standard than private universities because they have better staff, buildings, equipment, and operation. Although the annual state budget allocated is low, each state university has nevertheless more funds at its disposal than a private university. Furthermore, opportunities for training abroad for the teaching and administration staff are open almost exclusively to personnel of state universities, and only very rarely do teachers of private universities share this privilege. The state university is therefore more attractive to the prospective student.

State universities, however, are limited in their absorptive capacity of students, due to limitations of budget, space, equipment and personnel. Before 1966 universities all over the country were informally encouraged by the Government to take in as many students as possible and to produce as many graduates as they could. Quantity at that time enjoyed a higher priority over quality. But with the sober and rational approach generally prevailing after

1966 in development programmes the policies are reversed. Quality of students and graduates is now valued higher than quantity at state universities where admission is restricted through selective entrance examinations. This has left thousands of prospective students to look for other channels in their search for higher education. It is for this reason that private universities have a social function.

Private universities are sponsored by Catholic and Protestant churches, Islamic organizations, political parties, social organizations, and there is even one established by an individual. In spite of the widely-known fact that universities are not profit-making institutions, there are some groups of people who try to make money by organizing a university or college. Institutions in this category belong to the worst of their kind and have become more of a nuisance than a service to society. Space and equipment for teaching and academic activities are incredibly far below standard, courses are given at irregular times and with a lack of continuity, while the quality of the courses hardly deserve the adjective of 'academic'. Such universities simply ignore, out of sheer incapability, the instruction of the Minister of Education and Culture that sponsoring agencies should have the registered status of a legal body.

At the same time, however, there are private universities with a highly effective organization, dependable management, and a reasonably high academic quality. But in the eyes of the general public the best private university in the country still ranks lower in academic standards than the best state university.

Considering the great variety in size, quality, and organization of private universities the Minister of Education and Culture has made a ranking distinction of three categories: (i) *Registered*: Universities in this category appear in the registers of the Department of Education and Culture for purposes of checking. Other than sending them occasional enquiries and instructions whenever the need requires, the Government does not assume any obligation toward universities in this category. Diplomas and degrees, if any, issued by these universities have so far failed to gain the recognition of private and public employers; (ii) *Recognized*: Final examinations in universities of this category have to take place under supervision of a state university, designated by the Minister of Education and Culture. Diplomas are countersigned by the supervising teacher of the state university, and degrees are recognized as equal to those issued by state universities; (iii) *Equalized*: Universities in this category are formally declared by the Minister of Education and Culture as being on par with state universities with regard to their examinations, diplomas and academic degrees.

As in the case of the number and quality of university teaching personnel,

TABLE 3

NUMBER OF REGISTERED, RECOGNIZED AND EQUALIZED PRIVATE UNIVERSITIES IN 1970 ACCORDING TO LOCATION

Location	Registered	Recognized	Equalized	Total
Djakarta	54	14	9	77
Java (outside Djakarta)	135	24	7	166
Outside Java	70	7	2	79
	259*	45	18	322

Source: Directorate General of Higher Education, Department of Education and Culture, Indonesia

* The 259 registered universities include forty-three branches.

Table 3 also shows the concentration and the higher quality of private universities in Java, particularly in Djakarta, as compared with those outside Java. In this connection, Sumatra has far more of such universities than all the other islands combined, Java excluded.

While the Government has the authority and the means to transfer university teachers and other personnel from one state university to another in the country, private universities have generally not enough means to attract well-qualified teachers from other places. Their range of recruitment is confined to the local community. For this reason it is evident that Djakarta, having the largest concentration of inhabitants qualified for academic employment, and being the centre of national public and private businessess in command of large funds is in a far better position than other areas to produce good quality private universities.

Unfortunately there are no reliable statistics available on the number of teachers and students at private universities, due to the inefficient administration of a great many of them. It is especially difficult to maintain good administration because of the large turnover of staff and students. This observation, of course, does not apply fully to equalized private universities, but it is relevant to most of the registered ones.

SUGGESTIONS FOR IMPROVEMENT

Contemplating the present situation of the state and private universities in Indonesia, the question looms large whether this development does meet the need for higher education of the people, and whether it is helpful for the furtherance of national development in general. Although the Government itself no longer builds new institutions of higher learning, the trend in the past two decades leads to the expectation that the increase of private universities will still continue; and this happens in spite of the fact that cabinet ministers in public addresses have pointed out the growing unemployment of university graduates. Yet, among the university graduates it is difficult to find those with brains and character to carry out effectively the multiplicity of activities—surveys, planning, programming, implementation, supervision, and evaluation of developments—both in the public as well as in the private sectors, including the field of higher education itself. These contradictory factors may give us a lead as to what should be done to make higher education more meaningful for national development.

The present situation is that, in brief, there are too many state and private universities relative to the financing capability of the Government and society. Otherwise, universities would have been given better facilities and its personnel better salaries which would have enabled them to concentrate fully on their job at the university without having to engage in moonlighting. On the other hand, a drastic curb in the proliferation of private universities may cause additional social frustration among high-school graduates in search of higher education.

The most logical solution in the present situation seems to be that the Government should continue to refrain from building more institutions of higher learning. The practice of admitting only a limited number of new students should be maintained. Selection should be on the basis of academic quality, and certainly not on the ability to pay tuition fees. It cannot be emphasized strongly enough that universities should strive at academic quality in the first place, and only at quantity or anything else in the second place. If the labour market in the future were able to absorb more university graduates, then the entrance gates to the universities could be opened wider to meet the needs or the public and private sectors. New universities should be built by the Government only if exceedingly pressing needs cannot be met in other ways.

In its drive for better quality in higher education the Government of Indonesia has designated a small and selected number of universities as 'Centres of Excellence'. Another small number of selected faculties in each academic field have been appointed 'leading faculties'. The designation, psychologically rewarding as it is, is in no way designed as a compliment, but more as an assignment to increase its high academic quality and to help other universities and faculties to raise their academic standards. This assignment, however, is not followed by the allocation of better facilities for the universities and faculties in question. Only for the upgrading courses held by the leading faculties for teachers of other faculties in the same field and for some collective inter-university activities, can funds be allocated from the government budget.

It would most probably be more effective for the interests of the nation and for development purposes if the centres of excellence and the leading faculties could be given enough funds and facilities on a continuous basis to transform them into really high-quality institutions. Since universities and faculties can raise their academic quality only if enough qualified professors and other teachers work on a full-time basis at the university, their incomes from the centres of excellence and the leading faculties should be ample enough to make moonlighting unnecessary.

One can argue that a discriminating budgetary and payment policy would cause unnecessary dissent and perhaps resistance from those universities and faculties which do not share in the special financial privileges. That risk is not to be ignored.

With regard to this suggestion, one could refer to a decision of the President of Indonesia to give all employees of the Ministry of Finance an extraordinary monthly allowance of nine times their basic salary. Only the employees of the Ministry of Finance and no other government ministry have been given this special privilege since April 1971. The reasons for this special privilege have never been publicly announced, but it is fair to assume that through this special measure the Ministry of Finance as a whole is obligated to work more efficiently and with more dedication to bring in all the revenues needed for the financing of national development. The actual results have so far not been assessed yet, but envy or reactions from other ministries have so far been only latent and insignificant. With this experience in mind, it would probably be workable too to introduce the same arrangement in the field of higher education. This would undoubtedly lead to an improvement of the quality of higher education all over the country.

UNIVERSITY AND SOCIETY

If we are to make sacrifices for the betterment of universities, we should ask ourselves what use are universities to the society at large other than producing trained intellectuals? Are there any direct benefits which society or the country can extract from universities as such?

It was the policy in the colonial period to keep higher education separate from the government, and even from the realities of colonial life if they would discredit the ruling regime. It is at present generally understood that the university, the government and society should be mutually stimulating and supporting.

For universities to be directly useful to society, there need to be a mutual respect and honest recognition of the possibilities for cooperation. While society through legislation and financial endowments should support and protect universities, the latter should on the other hand render its best services to society in its efforts towards the realization of its current goals.

In the decades after World War II Southeast Asian countries have been engaging in national development, in most instances with the emphasis on economic development. This national endeavour offers numerous possibilities for the universities to be of help by assuming the role of academic consultants.

It should be made clear from the very outset that in this client-consultant relationship, it is the client who is responsible for determining the course and actions in development, while universities are only carrying out orders on the academic level. The client may be the government in the case of development in the public sector, or it may a unit of the armed forces for certain military projects, or it may also be an individual business company when development in the private sector is concerned.

What the university could do in this respect is to identify and analyze current problems through surveys, research or through seminars attended by both scholars and practitioners. A systematically conducted survey or research can reveal many new facts unknown before to anyone, or it may clarify problems which the government and the public in general have doubts about. Even if a survey or research only manages to reaffirm existing opinions about important subjects, it is of great value to those in charge of planning or implementation of projects for development.

Seminars with frank and objective discussions on well-prepared development subjects are most useful for the exchange of ideas, and to obtain an understanding in depth of important problems. One should not expect a seminar to solve problems right away, but the fresh insights and the new viewpoints on certain issues revealed during discussions may open previously unknown ways to the solution of important problems. The papers presented at a seminar and its proceedings if properly published can gain a national or even a world-wide audience.

A university, however, should not only be able to concern itself with current problems, but it should also make efforts through its most able scholars to make projections of what may be expected in the years to come. This capability of projection is extremely useful for planning developments. Projections should include well-calculated and logical changes in the forseeable future, which are either intended through planning or unintended as they are beyond control of society itself.

As an honest and loyal partner in development, a university should not be restricted in the exercise of academic freedom, since this freedom is an important instrument in formulating analyses, including inevitably objective criticism, of what is going on in the world. In this context the government should be appreciative of any criticism which may be relevant to policies or activities of the ruling elite. In no way should that criticism be regarded as a subversive or illegal political action to discredit the groups in power. If actions are conducted to the detriment of academic freedom, the country would lose an objective and constructive partner who would guard against unfavourable policies and defects in the developmental process.

In a developing country where many personalities in responsible positions feel the inadequacy of their intellectual upbringing, the university could make a valuable contribution by the publication of academic papers or by organizing public lectures which can strengthen the intellectual foundation of those who need it. The difficulty in this case is that people in highly responsible positions are either too busy to read academic papers and to attend public lectures, or they consider such activities as irrelevant or not useful.

Accepting the possibilities which may develop into obligations for universities to make themselves useful to national development, the question arises as to whether every university is objectively and effectively capable of carrying out activities which society expects them to do. The shortcomings on many levels which young universities in developing countries are suffering from, particularly the young universities in the provinces of Indonesia, give reasons for doubt. Taking this situation simply as a negative factor to development would not help that development at all. The best policy to adopt is to recognize the positive potentialities of each university and to help that university to overcome its problems and deficiencies. The unusually close interaction between the University of Indonesia in Djakarta and the Suharto Cabinet, and the growing organized cooperation for regional development between state universities in the provinces and local administration has a most encouraging effect, not only for development in general, but also for the two cooperating partners the university and the government.

It should be realized that national development in this age of science and technology is, among other things, measured by the efficiency of work and the academic quality of universities in the country.

PROBLEMS AND ISSUES OF HIGHER EDUCATION DEVELOPMENT IN MALAYSIA

*Mohamed Suffian bin Hashim**

INTRODUCTION

The problems and issues of higher education development in Malaysia are rooted in its history and is therefore necessary to begin with a brief description of its past educational policy.

Malaya (West Malaysia) did not obtain its independence until 1957, and Malaysia as a political entity did not come into being until 1963 when Sabah, Sarawak (East Malaysia) and Singapore which were given independence by the British joined independent Malaya. Singapore later separated from Malaysia. In this paper, when I mention Malaysia, I mean (depending on the context) either Malaya before 1963 or the subsequently enlarged federation of Malaysia.

The educational policy before 1957 was not motivated by a desire to produce enough educated people to man every level of government service and the private sector nor to unite the diverse races that inhabited the country. Managers and professionals were recruited in London and in the capitals of other European Commonwealth countries, particularly Eire, Australia and New Zealand, and clerks in India and Ceylon. In the beginning, and for decades thereafter, the public service and the private sector were staffed entirely by expatriates which had, from the point of view of the colonial Government, the merit of keeping the cost of education in the country down.

Few government schools were opened in which the natives could be educated, and the reason given for this was the lack of finance. This led to the opening of private schools by Christian missions and by the various racial communities. At first, these schools were in urban areas, and education did not reach rural areas where Malays were concentrated until the advent of vernacular schools where the language of instruction was Malay. There were also Tamil vernacular schools for children of Indian workers on rubber estates, and Chinese vernacular schools, the later financed privately by the Chinese community. Children of the different communities were thus compartmentalized in different schools, except for the minority of children who went to English-language schools. There, many races were to be found and those who grew up in the cosmopolitan atmosphere imbibed some sense of togetherness, in contrast to the others.

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The output of schools was controlled so as not to flood the labour market as had happened in India and Ceylon. The colonial government was accused of wanting to produce clerks and only enough to man the government service and the private sector, and there was no local university where high-calibre manpower could be educated and trained. Even when the Medical College (1905) and later the Raffles College (1928) were founded in Singapore to serve both that country and Malaya, the annual intake was minimal and, to prevent their graduates from claiming parity of salary and treatment with expatriate graduates from England, Australia and New Zealand, the documents their graduates were issued with were called diplomas, not degrees.

The Medical College and the Raffles College did not become a university until 1949 and Malaysia did not have a university of its own (the University of Malaya) until 1959, two years after independence. The University of Malaya in Kuala Lumpur remained the sole university for the country for ten years.

When Malaysia achieved independence in 1957, it was faced with two urgent problems in the field of education: first, the problem of nation-building, namely, the problem of bringing together the various races, most of whom are the products of separatist vernacular schools, the problem of inculcating in them loyalty not to their different countries of origin, but to Malaysia; and, second, the problem of providing, through university education, enough graduates to take over from the 2,000 or so expatriates who were to be phased out of the civil service, and also to enter the private sector for enter the private sector Malaysians must if they wished to change the direction of development of the country from being a producer of cheap raw materials and an importer of finished products from the West to being both a producer of cheap raw materials and a manufacturer of finished products, preferably products made from local raw materials.

CONSTITUTIONAL POSITION

Under the Constitution, education has become, since independence, entirely a federal responsibility, from the primary to the university stage. Immediately before independence responsibility was divided between state governments and federal government, state governments bearing responsibility for primary, secondary and trade schools, while the federal government bore responsibility for ensuring a common policy and a common system of administration for schools, and responsibility for tertiary education. The state responsibility for education below the university stage involved the states finding money for it. In fact, the states did not have enough money to provide for schools and thus they depended on federal allocations, the grants for which involved the states in discussions with the federal authorities and scrutiny of state schools by federal officers. After many years of experience, the states found the system of divided responsibility irksome (as did the federal government) and were, in 1957, only too glad to surrender total responsibility to the federal government.

It is also noteworthy that under the present Constitution it is expressedly provided that:

(i) all persons are equal before the law;[1]

(ii) there shall be no discrimination against any citizen on the grounds only of religion, race, descent or place of birth (a) in the administration of any educational institution maintained by government, and in particular the admission of pupils or students or the payment of fees, or (b) in providing out of the funds of Government, financial aid for the maintenance or education of pupils or students in any educational institution;

(iii) every religious group has the right to establish and maintain institutions for the education of children and provide therein instruction in its own religion;

(iv) there shall be no discrimination on the ground only of religion in any way relating to such institutions or in the administration of such laws, but federal or state law may provide for special aid for the establishment or maintenance of Muslim institutions or the instruction in the Muslim religion of persons professing Islam;

(v) no person shall be required to receive instruction in or take part in any ceremony or act of worship of a religion other than his own; and

(vi) the religion of a person under the age of eighteen is to be decided by his parent or guardian.[2]

The right to education, free or otherwise, is not, however, guaranteed by the Constitution though that does not prevent the federal government from spending nearly 20 per cent. of its budget on education (see Table 1), for every Malaysian knows that an educated citizenry is essential not only to a parliamentary democracy but also for economic and social advancement.

NATIONAL UNITY

Most newly-independent countries, when considering their higher education policies, are mainly concerned with the problem of how to produce enough graduates to man their public service and the private sector to enable them to develop the human and natural resources of the nation to the best advantage. Their most difficult task is how to find the money to pay for universities and their staff and how to find staff, because usually they have to be recruited

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[1] *Art. 8.*

[2] *Art. 12.*

TABLE 1
FEDERAL EXPENDITURE ON EDUCATION

Year (1)	Total federal expenditure, ordinary plus development ($ million) (2)	Total federal expenditure on education, ordinary plus development ($ million) (3)	Column (3) as percentage of Column (2) (4)
1964	2,139	334	15.6
1965	2,172	401	18.5
1966	2,370	424	17.9
1967	2,522	409	16.2
1968	2,820	491	17.4
1969	2,814	524	18.5
1970	3,243	542	16.7
1971	3,769	595	16.0

Source: *The Expenditure Budget of the Federal Government of Malaysia, 1972.*

abroad, but once the money has been found the rest is comparatively easy. In multi-racial Malaysia, however, as in other fields, so also in the field of higher education, we are bedevilled by communal considerations. Just as we find it difficult to solve the middleman problem in the marketing of agricultural produce, simply because to organize primary producers, who are in the main Malays, so that they will get better returns for their labour, will hurt non-Malays who exclusively constitute middlemen, so in the field of education it is difficult merely for an enlightened government to find the money for universities and their staff and then leave it to the professors to produce the necessary highly-skilled manpower that is needed. Professors are prone to maintain high academic standards (rightly so) as they wish their university to enjoy a high international reputation, and if allowed a free hand in deciding on admissions, they will admit only the best students. In Malaysia this would mean admitting mainly boys and girls who have had the advantage of being taught by well-qualified teachers in the best schools. In other countries that will cause no problem, but here in Malaysia it will, because 85 per cent. of Malays live in rural areas (as can be seen from Table 2) where the best teachers are reluctant to serve and consequently many of them will be excluded from admission if examination results alone are taken into account. If left unchecked this will perpetuate the gap between the haves in towns and the have-nots in rural areas (which, by the way, include over two and a half million non-Malays) which in the interests of national unity the Malaysian Government has vowed to eradicate.

Tables 3 and 4 show the diverse nature of the Malaysian population. They show that in 1957 in what is now West Malaysia, Malays constituted 49.8 per cent. of the population, Chinese 37.2 per cent. and Indians 11.3 per cent. while in 1970 the figures for the whole of Malaysia show that Malays constituted 46.8 per cent. of the population, Chinese 34.1 per cent., Indians 9 per cent., Dayaks 3.7 per cent., Kadazans 1.8 per cent. and other natives 3.2 per cent.

TABLE 2

POPULATION BY COMMUNITY AND DEGREE OF URBANIZATION IN MALAYSIA, 1970

Community	Urban areas		Rural areas	
	Persons	%	Persons	%
Malays	735,339	15.0	4,151,573	85.0
Chinese	1,645,977	46.3	1,909,902	53.7
Indians	326,808	34.7	616,136	65.3
Dayaks	8,618	2.2	377,642	97.8
Kadazans	6,354	3.4	178,158	96.6
Other Natives	19,363	5.7	318,032	94.3
Others	45,445	31.2	100,183	68.8
Total	2,787,904	26.7	7,651,626	73.3

Source: *1970 Population and Housing Census of Malaysia: Community Groups, Table III.*

It was acknowledged that the problems of welding the various races into a united nation may best be solved by concentrating Government's effort among the young generation in school, and the Razak Committee appointed in September 1955, two years before the attainment of independence to review the education policy, declared that they believed that it was necessary for our schools to have a Malayan outlook, and recommended that this should come through a common syllabus for all schools so that whatever language they

TABLE 3

COMMUNITY COMPOSITION OF WEST MALAYSIA AT CENSUSES OF 1947, 1957 and 1970

Community	1947	1957	1970
	%	%	%
Malays	49.5	49.8	53.2
Chinese	38.4	37.2	35.4
Indians	10.8	11.3	10.6

Source: *1970 Population and Housing Census of Malaysia: Community Groups, Table XIV.*

TABLE 4

COMMUNITY COMPOSITION OF MALAYSIA, 1970

Community	*Persons*	*Percentage*
Malays	4,886,912	46.8
Chinese	3,555,879	34.1
Indians	942,944	9.0
Dayaks	386,260	3.7
Kadazans	184,512	1.8
Other Natives	337,395	3.2
Others	145,628	1.4
Total	10,439,530	100.0

Source: 1970 Population and Housing Census of Malaysia: Community Groups, Table 1.

used, all pupils would follow the same curriculum.[3] Further, that they believed that the ultimate objective of the educational policy in Malaya must be to bring together children of all races under a national educational system in which the national language was the main medium of instruction, though progress towards this goal could not be rushed and must be gradual.[4]

The recommendations of the Committee were accepted by Government and embodied in the Education Act 1957.

In 1960 another Committee under the then Minister of Education (the Rahman Talib Committee), appointed to review the education policy, reported that they agreed with the earlier Committee that common content syllabuses were a crucial feature of the education system and that all schools must observe syllabuses approved by the Minister of Education,[5] and made recommendations for consolidating the place of the national language in the educational system as an instrument for creating national unity.

Because government attention was concentrated on building a united nation among the young in school (numbering 1,724,799 in 1965), little attention was directed at what was going on in the universities in the thought that they posed no problem. Indeed, the powerful Higher Education Planning Committee, consisting exclusively of government ministers, set up by Cabinet in 1962, concentrated their attention on the development and improvement of higher education in the light of the manpower needs of the country. Not once did they touch on the need for exploiting universities as an instrument for creating national unity.

Matters came to a head in the aftermath of the riots of 13 May 1969 which had repercussions among the students on the campus of the University of Malaya serious enough to persuade the National Operations Council (which governed the country for a while) to appoint the Majid Ismail Committee to find ways and means of promoting greater social and cultural contacts among students of the University of Malaya and of fostering goodwill and friendship among them. The Committee reported that at the outset, as a result of admissions being determined solely on examination results, Malays constituted only 20 per cent. of the student population and non-Malays 80 per cent. (which did not reflect the racial composition of the country as a whole), though this racial imbalance was rectified gradually over the years so that in the academic year 1970/71 the student population had succeeded to a degree in reflecting the racial composition of the country. Table 5 (being Table 1 in their report)[6]

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[3] Para. 11.

[4] Para. 12.

[5] Para. 70.

[6] *Report of the Committee appointed by the National Operations Council to study Campus Life of Students of the University of Malaya*, Kuala Lumpur, Government Press, 1971. Henceforth referred to as *Majid Ismail Report.*

TABLE 5

ANNUAL ENROLMENT OF STUDENTS (WITH THEIR RACIAL BREAKDOWNS) SINCE 1959 IN THE UNIVERSITY OF MALAYA

Year	*Chinese*	*Malays*	*Indians*	*Ceylonese*	*Eurasians*	*Others*	*Grand Total*
1959-60	195	62	41	16	4	4	322
1960-61	367	144	88	36	9	9	653
1961-62	585	217	120	62	14	12	1,010
1962-63	786	274	161	82	16	22	1,341
1963-64	1,042	358	211	75	26	24	1,736
1964-65	1,330	543	211	100	18	23	2,225
1965-66	1,669	721	292	103	24	26	2,835
1966-67	2,034	1,038	329	142	32	28	3,603
1967-68	2,559	1,401	377	159	32	32	4,560
1968-69	3,102	1,825	402	175	39	23	5,566
1969-70	3,532	2,373	516	177	35	39	6,672
1970-71	3,785	3,123	565	191	28	85	7,777

Source: Majid Ismail Report, Table I.

gives the annual enrolment of students by race in the University since 1959.

The Committee reported that though the increase over the years of the number of Malay students admitted was encouraging, too many of them were however reading humanities and not enough were reading science. Table 6 (being Table III in their report) gives the percentage distribution of students by race within each faculty during the period 1959-71. Table 7 (being Table VI in their report) gives the percentage distribution of students by race between humanities and the sciences for the period 1959-70. Table 8 (being Table VII in their report) gives the racial breakdown of graduates within faculties during the period 1960-70.

It will be seen from Table 8 that during the period 1960-70 while Malays constituted 40.55 per cent. of the B.A. graduates, 34.15 per cent. of the B.Econ. graduates, and 26.2 per cent. of the Education graduates, their number in the sciences was indeed very small. Out of 433 who were qualified as engineers there were only 4 Malays (0.88%); out of 129 new doctors there were only 12 Malays (9.3%); out of 1,707 graduating with a B.Sc. there were only 69 Malays (4.04%); and out of 223 Agriculture graduates there were only 40 Malays (17.92%). Taken as a whole, during that period, out of a total of 7,357 students who graduated, only 1,905 were Malays (25.9%), as against 4,381 Chinese (59.51%) and 1,071 others (17.86%).

The Committee recommended that university policy should ensure that the racial composition of the student population not only in the University as a whole but also in each faculty should as far as possible reflect the racial composition in the country, that faculties with poor Malay representation (which they said was the case with all the science faculties with the limited exception of Agriculture) should make every effort to admit more Malay students, that students from rural areas where facilities for studying science were limited should be given special assistance and tuition, and that pre-science and pre-engineering courses should be provided for them on the lines of the pre-medical course.

The Committee generally observed that 'it is a fact that those living and educated in rural areas are educationally under-privileged. Their full potential cannot be known on the basis of HSC results alone.'[7]

I have said above that the Malaysian Constitution prohibits discrimination in education; here I should add that the Constitution of the University of Malaya also prohibits distinctions of race and creed. The only concession allowed is in regard to the granting of scholarships, exhibitions and other similar educational or training privileges or special facilities given or accorded by the

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[7] *Majid Ismail Report*, p. 45.

TABLE 6

THE PERCENTAGE DISTRIBUTION OF STUDENTS BY RACE WITHIN EACH FACULTY, 1959-[illegible])

Academic Year	Race	Faculty	Arts	Science	Engineering	Agriculture	Education	Medicine	Economics and Administration
1959-60	Malay		58 (35.8%)	3 (9.7%)	1 (0.7%)				
	Chinese		65 (40.1%)	22 (70.9%)	108 (83.8%)				
	Others		39 (24.1%)	6 (19.4%)	20 (15.5%)				
			162 100%	31 100%	129 100%				
1960-1	Malay		128 (36.26%)	10 (8.7%)	4 (2.54%)	2 (7%)			
	Chinese		142 (40.23%)	73 (64.03%)	132 (83.02%)	20 (74%)			
	Others		83 (23.51%)	31 (27.27%)	23 (14.44%)	5 (19%)			
		Total	353 100%	114 100%	159 100%	27 (100%			
1961-2	Malay		193 (34.8%)	13 (6.41%)	4 (2.02%)	7 (13%)			
	Chinese		250 (45 %)	138 (67.98%)	159 (80.3%)	37 (70%)			
	Others		113 (20.2%)	52 (25.61%)	35 (17.68%)	9 (17%)			
		Total	556 100%	203 100%	198 100%	53 100%			
1962-3	Malay		247 (34%)	16 (5.03%)	5 (2.21%)	6 (8.2%)			
	Chinese		319 (44%)	228 (71.76%)	183 (80.98%)	56 (75.4%)			
	Others		157 (22%)	74 (23.21%)	38 (16.81%)	12 (16.4%)			
		Total	723 100%	318 100%	226 100%	74 100%			
1963-4	Malay		310 (34%)	18 (4.52%)	2 (0.78%)	11 (11%)	10 (29.45%)	7 (17.5%)	
	Chinese		400 (44%)	302 (75.93%)	221 (86.07%)	76 (76%)	15 (44.12%)	28 (70 %)	
	Others		198 (22%)	78 (19.55%)	34 (13.15%)	12 (13%)	9 (26.43%)	5 (12.5%)	
		Total	908 100%	398 100%	257 (100%	99 100%	34 100%	40 100%	
1964-5	Malay		459 (38.6%)	24 (5.19%)	4 (1.53%)	17 (13.8%)	28 (31.8 %)	11 (10.78%)	
	Chinese		506 (42.8%)	374 (80.99%)	230 (88.1 %)	92 (74.8%)	48 (54.55%)	80 (77.84%)	
	Others		223 (18.6%)	64 (13.82%)	28 (10.37%)	14 (11.4%)	12 (13.65%)	11 (11.38%)	
		Total	1,188 100%	462 100%	262 100%	123 100%	88 100%	102 100%	

1965-6	Malay		606 (40.51%)	28 (4.93%)	3 (1.07%)	34 (22.08%)	27 (18 %)	23 (12.37%)	
	Chinese		620 (41.44%)	472 (83.1%)	250 (88.97%)	102 (66.23%)	79 (52.67%)	146 (78.49%)	
	Others		270 (18.05%)	68 (11.97%)	28 (9.96%)	18 (11.69%)	44 (29.33%)	17 (9.14%)	
		Total	1,496 100%	568 100%	281 100%	154 100%	150 100%	186 100%	
1966-7	Malay		780 (42.48%)	50 (7.46%)	5 (1.61%)	56 (30.27%)	54 (28.27%)	44 (15.88%)	49 (36.84%)
	Chinese		729 (39.71%)	546 (81.49%)	280 (90.03%)	114 (61.62%)	89 (46.6%)	204 (73.65%)	72 (54.14%)
	Others		327 (17.81%)	74 (11.05%)	26 (8.36%)	15 (8.11%)	48 (25.13%)	29 (10.47%)	12 (9.02%)
		Total	1,836 100%	670 100%	311 100%	185 100%	191 100%	277 100%	133 100%
1967-8	Malay		966 (45.31%)	84 (9.57%)	11 (3.37%)	60 (29.7 %)	51 (23.72%)	70 (17.99%)	159 (38.13%)
	Chinese		800 (37.53%)	721 (82.12%)	293 (89.6 %)	128 (63.37%)	127 (59.07%)	273 (70.18%)	217 (52.04%)
	Others		366 (17.16%)	73 (8.31%)	23 (7.03%)	14 (6.93%)	37 (17.21%)	46 (11.83%)	41 (9.83%)
		Total	2,132 100%	878 100%	327 100%	202 100%	215 100%	389 100%	417 100%
1968-9	Malay		1,115 (47.8%)	133 (12.8%)	6 (1.8%)	62 (26.2%)	109 (33 %)	95 (18.6%)	305 (39. %)
	Chinese		867 (37.2%)	843 (81.2%)	313 (92.6%)	159 (67.1%)	164 (49.7%)	360 (70.6%)	396 (50.7%)
	Others		350 (15. %)	62 (6. %)	19 (5.6%)	16 (6.7%)	57 (17.3%)	55 (10.8%)	80 (10.3%)
		Total	2,332 100%	1,038 100%	338 100%	237 100%	330 100%	510 100%	781 100%
1969-70	Malay		1,489 (52.74%)	150 (12.6%)	11 (3.1%)	70 (25.5%)	102 (31.9%)	109 (19.2%)	442 (38.8%)
	Chinese		930 (32.94%)	965 (81.2%)	328 (91.4%)	187 (68.2%)	171 (53.4%)	388 (68.3%)	563 (49.5%)
	Others		404 (14.32%)	74 (6.2%)	20 (5.5%)	17 (6.3%)	47 (14.7%)	71 (12.5%)	134 (11.7%)
		Total	2,823 100%	1,189 100%	359 100%	274 100%	320 100%	568 100%	1,139 100%
1970-1	Malay		1,996 (61.13%)	157 (11.52%)	5 (1.3%)	91 (28.08%)	236 (53.39%)	128 (20.29%)	510 (37.5%)
	Chinese		867 (26.56%)	1,118 (82.03%)	365 (93.1%)	208 (64.2%)	147 (33.26%)	417 (66.09%)	663 (48.75%)
	Others		402 (12.31%)	88 (6.45%)	22 (5.6%)	25 (7.72%)	59 (13.35%)	86 (13.62%)	187 (13.75%)
		Total	3,265 100%	1,363 100%	392 100%	324 100%	442 100%	631 100%	1,360 100%

Source: *Majid Ismail Report, Table III.*

TABLE 7

PERCENTAGE DISTRIBUTION OF STUDENTS BY RACE BETWEEN HUMANITIES AND THE SCIENCES

Session	Race	Humanities (%)	Sciences (%)
1959/60	Malays	93.2	6.4
	Chinese	33.3	66.5
	Others	60	39.9
1960/61	Malays	88.8	10.9
	Chinese	38.6	62.1
	Others	58.4	41.4
1961/62	Malays	88.9	10.9
	Chinese	42.8	57.1
	Others	54.06	45.92
1962/63	Malays	90.1	9.78
	Chinese	40.58	59.4
	Others	55.8	44.12
1963/64	Malays	89.4	10.55
	Chinese	39.8	60.15
	Others	61.58	38.36
1964/65	Malays	89.65	10.48
	Chinese	42	58.22
	Others	66.99	33.22
1965/66	Malays	87.78	12.17
	Chinese	41.87	58.10
	Others	70.55	29.44
1966/67	Malays	85.05	14.92
	Chinese	43.78	56.22
	Others	72.86	27.10
1967/68	Malays	83.93	16.07
	Chinese	44.69	55.27
	Others	73.99	25.98

TABLE 7 (cont.)

PERCENTAGE DISTRIBUTION OF STUDENTS BY RACE
BETWEEN HUMANITIES AND THE SCIENCES

Session	Race	Humanities (%)	Sciences (%)
1968/69	Malays	83.61	16.10
	Chinese	45.94	53.91
	Others	76.18	23.77
1969/70	Malays	85.2	14.8
	Chinese	47.47	52.53
	Others	76.34	23.66
1970/71	Malays	87.79	11.86
	Chinese	44.29	55.66
	Others	74.56	25.43

Source: Majid Ismail Report, Table VI.

Notes:

Humanities:	1959-60 to 1962-3	Arts.
	1963-4 to 1965-6	Arts and Education (this includes science students).
	1966-7 to 1970-1	Arts, Education, and Economics and Administration.
Sciences:	1959-60	Science and Engineering
	1960-1 to 1962-3	Science, Engineering, and Agriculture.
	1963-4 to 1970-1	Science, Engineering, Agriculture, and Medicine.

TABLE 8

THE RACIAL BREAKDOWN OF GRADUATES WITHIN FACULTIES, 1960-70

Academic Year	Race	B.A.	B.Sc.	B.Eng.	B.Ag.Sc.	Education	M.B.B.S.	B.Econ.
1959-60	Malay	7 (58.3%)						
	Chinese			18.(85.7%)				
	Others	5 (41.7%)		3 (14.3%)				
	Total	12 100%		21 100%				
1960-1	Malay	18 (72 %)	1 (33.3%)	1 (4.3%)				
	Chinese		2 (66.7%)	20 (87.1%)				
	Others	7 (28 %)		2 (8.6%)				
	Total	25 100%	3 100%	23 100%				
1961-2	Malay	33 (33.7%)						
	Chinese	43 (43.9%)	12 (85.7%)	17 (100%)				
	Others	22 (22.4%)	2 (14.3%)					
	Total	98 100%	14 100%	17 100%				
1962-3	Malay	58 (34.9%)	3 (4.7%)		1 (14.3%)			
	Chinese	80 (48.2%)	49 (76.6%)	24 (92.3%)	5 (71.4%)			
	Others	28 (16.9%)	12 (18.7%)	2 (7.7%)	1 (14.3%)			
	Total	166 100%	64 100%	26 100%	7 100%			
1963-4	Malay	64 (33.9%)	3 (3.75%)		2 (13.4%)	7 (23.3%)		
	Chinese	90 (47.6%)	65 (81.25%)	24 (79%)	9 (60 %)	15 (50 %)		
	Others	35 (18.5%)	12 (15 %)	7 (21%)	4 (26.6%)	8 (26.7%)		
	Total	189 100%	80 100%	31 100%	15 100%	30 100%		

1964-5	Malay		86 (34.82%)	4 (3.2%)	1 (2%)	2 (9.5%)	20 (27.8%)			
	Chinese		111 (44.94%)	108 (85.7%)	43 (86%)	18 (85.7%)	39 (54.1%)			
	Others		50 (20.24%)	14 (11.1%)	6 (12%)	1 (4.8%)	13 (18.1%)			
		Total	247 100%	126 100%	50 100%	21 100%	72 100%			
1965-6	Malay		121 (36.23%)	4 (2.19%)		2 (8.7%)	21 (18.26%)			
	Chinese		147 (44.01%)	160 (87.43%)	28 (87.5%)	21 (91.3%)	63 (54.78%)			
	Others		66 (19.76%)	19 (10.38%)	4 (12.5%)		31 (26.96%)			
		Total	334 100%	183 100%	32 100%	23 100%	115 100%			
1966-7	Malay		163 (37.5%)	8 (4.1%)		3 (10.3%)	38 (23.1%)			
	Chinese		191 (44.1%)	161 (82.5%)	51 (96.2%)	22 (75.8%)	85 (51.8%)			
	Others		80 (18.4%)	26 (13.4%)	2 (3.8%)	4 (13.9%)	41 (25.1%)			
		Total	434 100%	195 100%	53 100%	29 100%	164 100%			
1967-8	Malay		239 (42.8%)	7 (2.9%)		3 (10.7%)	41 (24.4%)			
	Chinese		222 (39.7%)	211 (88.7%)	51 (92.7%)	21 (75 %)	104 (61.9%)			
	Others		98 (17.5%)	20 (8.4%)	4 (7.3%)	4 (14.3%)	23 (13.7%)			
		Total	559 100%	238 100%	55 100%	28 100%	168 100%			
1968-9	Malay		269 (43.9%)	17 (5.47%)	1 (1.4%)	12 (23.5%)	81 (27.8%)	8 (12.9%)	31 (31.3%)	
	Chinese		242 (39.5%)	277 (89.06%)	71 (95.9%)	37 (72.6%)	155 (53.3%)	48 (77.4%)	62 (62.6 %)	
	Others		102 (16.6%)	17 (5.47%)	2 (2.7%)	2 (3.9%)	55 (18.9%)	6 (9.7%)	6 (6.1%)	
		Total	613 100%	311 100%	74 100%	51 100%	291 100%	62 100%	99 100%	
1969-70	Malay		311 (44.5%)	22 (4.5%)	1 (1.4%)	15 (30.5%)	91 (30.23%)	4 (5.9%)	81 (35.4%)	
	Chinese		278 (39.8%)	443 (89.8%)	61 (85.9%)	29 (59.2%)	165 (54.81%)	60 (89.6%)	123 (53.7%)	
	Others		100 (15.7%)	28 (5.7%)	9 (12.7%)	5 (10.2%)	45 (14.95%)	3 (4.5%)	25 (10.9%)	
		Total	699 100%	493 100%	71 100%	49 100%	301 100%	67 100%	229 100%	
Cumulative Year	Malay		1,369 (40.55%)	69 (4.04%)	4 (0.88%)	40 (17.92%)	299 (26.2%)	12 (9.3%)	112 (34.15%)	1,905 (25.9%)
	Chinese		1,404 (41.59%)	1,488 (87.17%)	408 (90.06%)	162 (72.68%)	626 (54.9%)	108 (83.7%)	185 (56.4 %)	4,381 (59.54%)
	Others		603 (17.86%)	150 (8.79%)	41 (9.06%)	21 (9.4%)	216 (18.9%)	9 (7 %)	31 (9.45%)	1,071 (14.56%)
		Total	3,376 100%	1,707 100%	453 100%	223 100%	1,141 100	129 100%	328 100%	7,357 100%

Source: Majid Ismail Report, Table VII.

federal government, as to which the Malaysian Constitution allows preferences to be given to Malays and natives of Borneo, and it is further provided by the University Constitution that any student with the minimum entry qualifications who has been awarded a government scholarship or other similar financial assistance from public funds, may not be refused admission except with the consent of the Minister of Education.

It was however felt by Government that as education, particularly university education, is the key to the economic upliftment of Malays and natives of Borneo who have been left far behind by the other communities and that universities should not have a free hand in determining admissions, it was necessary to amend the Malaysian Constitution to arm themselves with power to require universities to admit more Malays and natives of Borneo, and that was done by the Constitution (Amendment) Bill 1971 which was passed overwhelmingly by Parliament in February 1971. The Prime Minister, when introducing the amendment, after referring to the Second Malaysia Plan, 1971-75, which seeks to restructure the nation's economy to ensure a proportionate participation of the different races in the urban, commercial and industrial life of the nation, said that the amendment was to reserve places in selected courses of studies where the number of Malays and natives of Borneo were disproportionately small so that in that way the present racial imbalance would be rectified as a contribution towards national unity, and that the Government's new power would be exercised with care and discretion, without detriment to the legitimate interests of other communities.

During the academic year 1972/73 all qualified Malays who applied to join the faculties of sciences at the University of Malaya have been accepted. It is recognized that one of the reasons for the paucity of Malays reading sciences was the lack of facilities in areas of Malay concentration. The Second Malaysia Plan has provision for the opening of ten pilot secondary science schools in various parts of the country, each school to have an enrolment of 1,200 students, predominantly from rural areas, with residential facilities for approximately 70 per cent. of the students.

The importance of welding the various races into a united nation is underlined by the Second Malaysia Plan in the statement of the objective of Government's education policy which gives first place to the consolidation of the education system 'to promote national integration and unity'.

The University of Malaya, indeed any university in Malaya, is an ideal nursery for the growth and cultivation of national unity, as university students are young, enthusiastic, impressionable and highly intelligent; they are of all races and faiths and they come from all over the country. In their daily contacts, discussions and arguments with one another on the campus they are made conscious that their fates and fortunes are bound up with each other's. The principal reason why it was thought that the University of Malaya had not taken advantage of the opportunity of actively fostering ideals of national unity to the maximum extent was the fact that in the early days it was heavily dependent on expatriate staff. They considered it their main business to research and teach, a task they did well; but they were not made to feel obliged to identify the problems of the nation and help solve them. Having little or no contact with the new political masters of the country, they were left unaware of national aims and of the most serious problems that confronted Malaysia, and being mainly academicians it is doubtful that even had they been made aware they would have considered it their responsibility to find ways and means of overcoming the problems. Since then, however, more and more Malaysians have joined the academic staff until today there is only a small number of expatriates left, and it is already noticeable that local staff are concerned with the vital necessity to use the university as a positive instrument for fostering national unity.

I have above given prominence to the problems encountered in the University of Malaya because it is the oldest university, and until 1969 it was the only university in the country, for the University of Penang (now the University of Science of Malaysia) and the National University were not founded until 1969. It is probable that the problems encountered by the senior university will also be encountered by the other universities unless careful watch is maintained by their authorities.

PRODUCTION OF MANAGERS AND PROFESSIONALS

The next important purpose of higher education in Malaysia is unquestionably to produce enough high-calibre manpower to man government service and the private sector and to develop the human and natural resources of the nation. At this stage of Malaysia's history, education for education's sake is a luxury beyond the country's means, since there is so much to be done and so little time in which to do it. Malaysian academicians on the whole recognize that this is so. That Government also recognize it is shown by the fact that in 1962 they appointed the high-powered Higher Education Planning Committee to make recommendations 'for the development and improvement of higher education in the light of the foreseeable needs . . . of the country'.

In the early days of independence the number of graduates was small and the annual increase in their number was gradual (as can be seen from Table 8). During the first ten years after independence, because of their scarcity, graduates were eagerly snapped up, even before the results of their final examinations had been announced, as administrators and professional officers in government service, as graduate teachers in schools, and as executives in the private sector. It must be said that Government and the teaching profession were the main absorbers of arts graduates while the private sector was more selective in their requirements. For so long as the demand was insatiable it did not matter much what courses graduates had pursued and little attention need be given to university curricula. However within the last five years or so, arts graduates, especially those unwilling to go into the teaching profession, have begun to experience difficulty in finding, not work, but work of their choice, and both Government and academicians have been impressed with the importance of producing only graduates with the necessary disciplines that are relevant to national needs and to cut down courses of little practical value. For instance, in 1966 there were engineering graduates registered with the Employment Exchange looking for work, but today employers have to hunt for engineers, and the University of Malaya has only recently significantly increased their intake of engineering students. The sudden spurt in demand for engineers had not been anticipated. This was due to lack of effective co-ordination between Government and the university authorities and the difficulty of projecting future manpower needs.

CENTRAL CO-ORDINATING BODY

At present universities deal with Government through the Ministry of Education to which all requests for funds are made (90 per cent. of university funds come from the Treasury). Until 1969 when there was only one university this system proved satisfactory, but today when there are five universities (including the National Institute of Technology which was formerly the Technical College, and the University of Agriculture which was formerly the College of Agriculture), it is thought that the task of co-ordinating university development has become too complex for the Ministry of Education, which has more than enough to do coping with the thousands of schools of various types that dot the country, and that the time has come to establish a separate body on the lines of the University Grants Committee in England, headed by a person who enjoys the confidence of Government and the universities to advise on university development and related matters.

The decision to open the National University was taken, not after a slow and careful study of facts and figures which were thought to point irresistibly to the need for another university, but in the heat of a general election when the increased demand for university places was used as a political issue. To quieten down the public clamour, Government agreed, not only to set up the National University, but to set it up in Kuala Lumpur, which was already endowed with many institutes of learning, when a few moments' reflection should have shown that universities, which are not only centres of learning but also generators of the local economy[8] should not all crowd into the already congested capital but should be spread evenly throughout the country.

A central co-ordinating body, if established,[*] will be able to collect facts and figures bearing on university development and to study them leisurely, and accordingly make recommendations to Government on the establishment of new universities and their siting, on the expansion of existing universities, and on the courses to be offered in the different universities so as to avoid expensive duplication and overlapping, and ensure not only enough graduates are produced but, more important, enough graduates with the right kind of disciplines that are really needed by the country. Experience has shown that a number that is enough for a certain period may be not enough or may be too much for a later period, and adjustments should accordingly be made. This requires constant review by a standing high-powered body consisting of experts who are not concerned with the hectic day-to-day business of government and who are not afraid to make recommendations that are right for the nation, irrespective of their popularity with the electorate.

Another function that may be envisaged for the co-ordinating body will be the co-ordinating of the various universities. Vice-chancellors are powerful personalities and usually each fights fiercely for the advancement of his own university. This attitude is understandable, but it is essential that no university should be allowed to develop in isolation; national consideration should be paramount, and if the members of the body are of the right calibre it should have little difficulty in persuading universities to co-operate with each other in meeting national needs.

The co-ordinating body might also advise Government on the number of university places that may be provided by the nation. The years after the end of World War II have seen a tremendous demand for school places with the number of Malaysians passing the Higher School Certificate examinations (from whom university students are selected) increasing from year to year; and as a graduate can, immediately he leaves university, earn $750 a month (more than ten times the average income of the rural population which is $60 per month), there is a tremendous demand for university places. This year (1972/73) the University of Malaya can accept only 2,600 new students and has to disappoint two or three times that number, including more than a thousand government scholars. The fact that there are 22,000 Malaysians

[8] For instance, the University of Malaya pumps into the local economy $32 million a year, which is the cost of operating that University.

[*] *Editor's note*: Since this paper was written, a Higher Education Advisory Council has been established in Malaysia with the author of this paper as its Chairman.

studying abroad (though it is true that some of them are in schools or studying to become nurses) shows the frantic demand for higher education. How many more university places should Government be prepared to provide? The danger is that if the decision is left to be made entirely under the present system, Government may yield to political pressures and take the line of least resistance and provide as many places as may be demanded, especially during a year of general elections, irrespective of national requirements, despite the fact that such a decision may bring in its train a political problem of another kind (unemployed graduates); whereas if there is interposed, between such a demand and Government an independent body, this body may be able to strengthen Government's hand in reaching the right, though unpopular, decision.

The body might also advise Government on the type of constitution for the various universities in the country. At present Malaysia has only tried the English-type of university constitution inherited from the University of Malaya in Singapore which was the forerunner of the University of Malaya. Accordingly, our universities enjoy a large measure of autonomy, whereby each of them appoints its own vice-chancellor and other officers, and all its staff, academic and otherwise, and Senate (a wholly academic body) determine courses, curricula, etc. and each dean (a powerful figure) is elected by faculty, and student applications for admission are determined by faculty. The important point to observe is that under this system Government has little or no direct say in the running of the university, for no Minister is appointed or elected ex-officio to any university office. I do not think that the constitutions of universities already established should be altered, but I do think that the country should experiment with other kinds of university constitutions. Since 90 per cent. of university funds come from the public purse, should not the vice-chancellors and deans of one or two of new universities be appointed by Government to be responsible to a council dominated by government representatives? A few years ago Government opened a new school (the Federation Military College) headed by a serving colonel from the armed forces; and the Mara Institute of Technology headed by a civil servant; and the consensus is that each of these institutions quickly built up and maintained high standards that won public admiration, though neither of them is headed by an academician. The Technical College has been run entirely by Government, and now that it has achieved university status under the name of National Institute of Technology, should it not continue to be run by Government? All universities in developing countries, such as Malaysia, should serve the national interest, and if we have two types of universities it will be interesting to observe which type will achieve national aims more economically and more efficiently.

CO-OPERATION BETWEEN GOVERNMENT AND ACADEMICIANS

Though Malaysian academicians serve the nation well by educating and producing highly trained management and professional staff for government service, it is regrettable that they have not been called upon by Government to help with the drawing up of national development plans and their implementation to the extent that is thought justifiable, considering the pool of accumulated brain-power that they represent. This is rather paradoxical since the civil servants and professionals involved in planning and implementation have many of them been students of our academicians. One would have thought that they would have been only too ready to call on expert help. The reason for this lack of co-operation is probably this: public servants are subject to the constraints of the Official Secrets Act and are reluctant to expose government files (the contents of some of which contain political explosive) to academicians whose lifelong training is to analyze, criticize and publish, and that public servants are of necessity required to deal with problems of real life for which they have to suggest solutions in real time, while academicians are prone to wait for complete evidence before committing themselves and to diagnose the nation's ills without feeling responsible for prescribing the necessary medicine. Perhaps at this stage of development when our universities are not only growing but growing fast, thus throwing a heavy teaching burden on many of our academicians, they are relieved at not being called upon by Government for service in ministries as well. But in the not too distant future when the growth of our universities has stabilized and our academicians are no longer hard pressed by their university duties, they might be called upon to serve not only by producing public servants but also by actually occasionally helping them in their work.

Another aspect of this problem is the extent to which research at university may be harnessed for purposes of national development. Hitherto little of it is utilized by Government, and Government tends to rely on bodies outside the campus for whatever research is required for national development, for instance, the Rubber Research Institute and the Institute of Medical Research, both bodies of international repute. It is true that official reliance on these institutes was forced by circumstances, for at the time when they were established there were no universities in the country. But it is remarkable that even when there were universities the Government still thought it fit in 197[illegible] to establish outside the universities the National Institute for Scientific and

Industrial Research. Probably this was because of the well-known fact that academicians loathe being directed in their research and loathe being hurried, whereas government research has a definite practical purpose in view and must produce quick results.

HIGHER EDUCATION IN LAOS WITH SPECIAL REFERENCE TO THE ROYAL INSTITUTE OF LAW AND ADMINISTRATION

*Tenh Teso**

INTRODUCTION

Laos first expressed the desire to undertake the training of its administrative personnel on its own soil with the establishment of Sisavang Vong University in 1958. Today, the Royal Institute of Law and Administration, together with the Faculty of Medicine, represents an initial stage in the development of a university complex for the kingdom. The object of the Institute is to train the middle- and higher-level civil servants and magistrates for the country.

Reorganized during 1963, 1969 and 1971, the RILA is responsible to the Directorate of Higher Education in the Ministry of National Education. It is administered by a Director and a Secretary-General who are assisted by an accountant and a general supervisor, the whole being under the control of an Administrative Council.

Two cycles of training are offered — the Higher Cycle and the Secondary Cycle. The Higher Cycle, which recruits its students by competitive examination from candidates who have completed their secondary education (admission is automatic for those who have obtained the Baccalaureat or the Diploma *cum laude* of the RILA), trains *xan ek* (Category A) civil servants and magistrates. It is subdivided into three sections: Public Administration, Economics and Finance, and Magistrature. Its programme lasts four years. The Secondary Cycle, which lasts three years, recruits its students by competitive examination from candidates who have obtained the BEPC (diploma awarded after four years of secondary schooling), and comprises two sections: Public Administration and Judiciary. It trains *xan tho* (Category B) civil servants and magistrates.

HISTORICAL NOTE ON THE TEACHING OF LAW IN LAOS

After the failure in 1826 of Chao Anou's attempt to acquire sovereignty over Siam, Laos lost its political independence. Only the kingdom of Luang Prabang, the last vestige of Lan Xang, still retained the appearance of a sovereign state, although a much-weakened one. It required the establishment of a French protectorate by the Franco-Siamese treaty of 1893 for Laos to acquire little by little its modern status as an independent nation.

Although the effects of 'the French peace' were modest in the social and economic fields, it must be recognized that the political and administrative system was partly modernized. An indigenous consultative assembly was instituted in 1923 in Vientiane, and in the same year, by an Order of the French Senior Resident in Laos, the School of Administration in Laos was set up and became known as the 'School of Mandarins'. Its aim was to train members of the Lao administration and its teaching, which lasted one year, was mainly directed towards those already within the service.

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In 1927, at the time of the separation of the administration from the judiciary, the School of Mandarins was transformed by an Order of the Government of French Indo-China into the 'Practical School of Law and of Lao Administration'. Its object was to train junior members of the colonial administration.

The School, consisting of an administrative section and a Judical section, was intended to train civil servants and magistrates. Its teaching became more concerned with law and was also more theoretical. The length of the programme was increased to two years for the Judical section, while for the administrative section, it continued to be of one-year duration.

After the Franco-Lao *modus vivendi* of 1946, which prepared the way for Lao independence, a Royal Ordinance confirmed the title 'Practical School of Law and Administration' and set as the school's aim the training of future civil servants and magistrates in an independent Laos.

THE ROYAL INSTITUTE OF LAW AND ADMINISTRATION AS A PART OF SISAVANG VONG UNIVERSITY

Conscious of the need to carry out at home the training and education of its civil service cadres, the Lao Government in 1958 created a university called Sisavang Vong University. The first establishment within this University was the National Centre for Political, Administrative and Judicial Studies. This was also the first centre for the teaching of law in Laos since its attainment of independence. Its organization and operation, fixed by Presidential Order in 1959, were similar to that of the Practical School of Law and Administration.

The Centre was transformed into the Royal Institute of Law and Administration or RILA in 1963. Subsequently, RILA was affected by two important turning-points.

The reform of 1969 was aimed at the construction of a modern and harmonious organization. It laid down new conditions for entry, academic status, specialization and improvement in each of two cycles: Higher A and Secondary B.

The definition of the RILA's objective to 'train administrative cadres as well as junior and senior magistrates in Laos' put the accent on the character of the national school as a centre for the training of cadres for the civil service as well as for the magistrature, and therefore put an end to the controversy in terminology between "Faculty of Law" and "Institute of Administration". It is an Institute of Law because magistrates are trained there; it is also an Institute of Administration because it trains the civil servants of the kingdom. The reality, however, is more subtle: in the absence of a Law Faculty, the RILA must undertake judicial and economic education in Laos as well.

Very soon the text of the reform was to reveal some inadequacies, especially in a failure to adapt to local requirements and realities. Thus new structural reforms were called for.

The International Institute of Public Administration in Paris (IIPA), a sole outlet for further training for the best students at the RILA, required its students to have a degree in law or an equivalent foreign diploma. As a degree in law consists of four years of study after the Baccalaureat (since 1954), this led naturally to the decision to lengthen the course of study in the Higher Cycle at the RILA from three to four years.

From this point it became possible to establish a bridge between the diploma of the IIPA and a doctorate in law. This was precisely what the RILA would wish as it provided an opportunity for its best students to achieve a higher level of university study so as to permit the progressive formation of a corps of teachers of law of Lao origin.

This wish was realized by the Convention of 1970 between the Faculty of Law in Paris and the IIPA and by an Order of the Secretary of State for the Civil Service of 1970 which recognized the existence of a higher cycle of study and research in administration, organized jointly by the IIPA and the Faculty of Law in Paris. As a result of this decision, the diploma of the IIPA, obtained with a mark of 13 out of 20, constituted the first year of the Doctorate in Law (of the Third Cycle). It only remained now for those interested to successfully complete one year of further study in the Faculty of Law in Paris in order to obtain the degree of Doctor of Administrative Sciences or Doctor of International Administration. They will then be qualified to teach at the RILA. This was the main outcome of the reform of 1971.

ORGANIZATION AND OPERATION OF THE RILA

1. Administration

The RILA is responsible for the "training of civil servants as well as of junior and senior magistrates" and it operates under the Directorate of Higher Education. The Institute is a public establishment and not an administrative department operating under a Directorate or Ministry of Public Services, as would be the case in many other countries.

The RILA is administered by a Directorate under the control of an Administrative Council. The Director of the Institute, appointed by the Minister of National Education, directs and co-ordinates the overall activities, is responsible for internal discipline, and proposes to the Minister of Education the adoption of any measure he feels necessary to ensure maximum effectiveness in the Institute's mission. The Director is assisted by a Secretary-General, and also by an accounting department and a disciplinary service. The Secretary-General, who collaborates closely with the Director, assists him in his administrative duties as well as with study programmes, examinations, student projects and in the preparation of texts and regulations concerning the operations of the Institute. The Secretary-General is assisted by a secretarial staff. The accountant is responsible for financial arrangements concerning students and staff as well as for the buildings and equipment, while the general supervisor takes care of disciplinary matters according to the Institute's internal regulations.

As for the Administrative Council, it gives advice and formulates recommendations on all important questions concerning the smooth running of the establishment. The Council, presided over by the Minister of Education, is composed of representatives from each Ministry, the Director of the Civil Service, and such experts whom the President considers useful to invite. In addition, the Director of Higher Education and the Director and Secretary-General of the Institute are automatically members. The Secretary-General acts as secretary to the Council. This body is by no means a purely formal organization. It meets at least once a year to evaluate results, elaborate or revise the teaching programmes and to assist the Director in his administrative tasks.

2. The Training Programmes

The mission of the RILA is a double one: to train civil servants and junior and senior magistrates, and also to complete the professional training of magistrates and bureaucrats already employed in the various administrative services. The training of civil servants and magistrates is undertaken by means of programmes at two levels of instruction:

(i) The Secondary Cycle (series B) of three years of study is divided into two specialized sections: Public Administration and Judiciary, after an initial year of general training.

(ii) The Higher Cycle (series A), for which the programme has been extended from three to four years since October 1971, is divided into three sections: Public Administration, Economics and Finance, and Magistrature. This distribution is subject to modifications in accordance with the needs of relevant ministerial departments. (It is for this reason that from October 1972 the Judiciary section of Series B will be eliminated from the programme since the Ministry of Justice will recruit no further *xan tho* magistrates after 1974.)

The four years of study are made up as follows: two years of general training common to all sections, followed by two years of specialization within the three sections. At the end of the third year, a project of three months is undertaken in the departments which the students are destined to join so as to give them experience of the real work which awaits them. After the project the students write a short dissertation which must be defended at the end of the fourth year in front of a jury consisting of the lecturer who supervises the project and the head of the department in which it is undertaken.

The Institute also accepts personnel from the country's administrative services who are admitted to undertake a programme of in-service training or orientation of not longer than eighteen months.

3. Admission

The Institute is open to all Lao citizens of either sex who fulfill the following general conditions:

(i) Having no past criminal or prison record.

(ii) Being physically fit for active administritive service.

The admission of regular students is decided by competitive examinations, the number of places to be filled each year being fixed by the Ministry of Education. The examinations take place at the beginning of October in Vientiane, Luang Prabang, Savannakhet and Pakse.

The examination for entry into the Secondary Cycle is open to candidates who have obtained the BEPC or DEPC (diploma awarded after four years of secondary schooling). Candidates must be between the ages 16 and 23. For candidates already in the civil service and aged under 33 years, the Certificate of Primary Studies (awarded at the conclusion of primary schooling) is required and they must have served at least four years in the administration. The examinations consist of a paper on general culture written in French, an essay in Lao on traditions and customs of Laos, and a paper on Lao history written in French. These papers constitute a test of admissibility. Successful candidates in these papers must in addition take an entrance examination which consists of a commentary on a subject of general culture followed by an interview with the jury.

The examination for entry into the Higher Cycle is open to any candidate who has completed the course of study in the top class in the secondary school system. The age limit is from 18 to 23 years. Members of the civil service who hold the BEPC can sit the examination under the same conditions as for the

Secondary Cycle. The test of admissibility consists of a paper on general culture written in French, an essay in Lao, and a paper on contemporary history. The entrance examination follows the same lines as that for Series B candidates. Finally, candidates having passed the Baccalaureat or the diploma of the RILA (*cum laude)* are admitted automatically.

4. *The Teaching*

For the two cycles the common base of general training (one year in the Secondary Cycle, two years in the Higher Cycle) is intended to introduce the students to the principles of law and political economy. At the end of the first year of the Secondary Cycle, and of the second year of the Higher Cycle, the students follow different courses according to section, with the aim of acquiring a more specialized knowledge.

Concerning methods of work, stress is laid on the concrete and rational nature of the students' work, and this has allowed a reduction in the amount to be learnt by pure memorizing which leaves few marks in the mind once the examinations are left behind. Instead, tests requiring personal reflections are given, which stimulate the student's intelligence and mould his judgment. For this reason several half-days are devoted to practical work requiring study of Lao case-histories and also to debates, special lectures and use of the library. The library, though still modest in size with only a thousand volumes, today constitutes the centre of documentation on law and economics which Laos had previously lacked.

The lecturing staff are in the majority of Lao origin (nineteen out of thirty-three part-time lecturers) and these include experts in both practice and theory. They have in common a knowledge of Lao law and of the particular needs of Laos. The full-time staff, fourteen in number, are provided by the French Mission for Economic and Technical Aid (META).

5. *Passing-out Qualifications*

At the end of each year the students undergo an examination consisting of written and oral tests to which are added the marks acquired in tests during the year, as well as marks for practical work and for work in class. Those students who have an overall average of ten out of twenty are admitted into the next class. Only a limited number are permitted to repeat a year, and those with an average of less than eight out of twenty are excluded from the Institute.

At the end of each cycle, those students who have passed the final examination are awarded the Diploma of the Institute, classed according to cycle. Their entry into the various administrative or Judical services is determined according to their final grades. Each year the French META offers to the best students scholarships for further study at the IIPA in Paris. Administration personnel admitted for in-service training receive a certificate of attestation for the courses undertaken.

IMPROVEMENTS IN MATERIAL CONDITIONS

Parallel to the structural reforms of the Institute's programmes, conditions of study have gradually improved, thanks to a very considerable programme of site extension and to the aid of friendly countries. Thus in 1966 a dormitory with seventy beds, as well as office space for the administration, was put up with the aid of the Colombo Plan. In February 1972 work was completed on an auditorium, two class-rooms and the Director's office. The whole, at a cost of US$100,000, was provided by META.

ACHIEVEMENTS AND PERSPECTIVES

Thirteen years after its foundation, the RILA can be proud of having trained a large number of the nation's administrative and legal personnel. In the early years about twenty, and more recently, around fifty, civil servants and magistrates have passed out of the Institute annually.

This statement in no way signifies that the School is content to sit back in foolish optimism and accept the congratulations and respect which it is accorded. On the contrary, the accent is now being placed on the need to improve structures and teaching methods continually with a view to adapting these increasingly to the realities of the country's situation.

An important programme of training for permanent lecturers of Lao origin constitutes, as we have seen, the basis for the reform of 1971. But already, with the help of the Asia Foundation, the RILA has plans to send some of the best students of 1971/72 class to Thailand (Thammasat University) and to Canada. On the other hand the RILA will continue to rely considerably on part-time lecturers who offer the invaluable advantage of introducing the students at first hand to the practical side of the work which they will subsequently be undertaking. A special effort is being planned for the training of future cadres in the economic and financial services since the need for qualified personnel in this field is particularly great. This effort is being supplemented by a policy of acquisition for the library of several hundred works in law and political economy.

Thus, along the path which it is following, the RILA must conserve the spirit which has been its own since the beginning, and which aims to train all the future higher civil servants and magistrates of the country. Through the variety of its courses, it provides for each student a specialization which gives him the maximum opportunity for carrying out effectively and competently the tasks which await him on leaving the Institute.

THAI UNIVERSITIES:
A GLIMPSE AT SOME OF THE ISSUES

*Sunt Techakumpuch**

As we are approaching the final quarter of the present century, the effects of the high rate of population increase has begun to be felt in almost every phase of human affairs all over the world. Higher education is no exception. Countries which hardly knew any problem regarding accommodation capability in higher education institutions even as recent as only a decade ago are finding the inadequacy to meet the rapid rise of social demands for university education a point of growing concern.

A developing country faces an even more menacing prospect in this respect. The public demand for higher education seems to climb, almost overnight, at a rate out of proportion of anything else. Perhaps it is the sudden realization by the mass of the desirability of university education after a lengthy period of dormancy. From the point of view of the individual, prestige and more opportunities for better jobs are associated with university degrees. From the point of view of the society, university graduates are urgently needed for the social and economic development of the country.

Pressed with such demand on the one hand and confronted by other immediate programmes on the other hand, the developing country, restricted by limited resources, is indeed in an uneasy position of having to balance well.

This is perhaps the present situation with Thailand.

OVER A HALF-CENTURY PERIOD

In order to provide a background for further discussion, an account of activities during a span of approximately fifty years of university education in Thailand will be given in the following paragraphs. To avoid any misunderstanding of terminology, the term 'university' will be used as being synonymous with any institution of higher learning or degree-granting institution. This is in keeping with the customary naming of degree-granting institutions in Thailand as universities. Thus a university in this sense may also differ from one of the usually understood status.

The Country's First University

The year 1916 may be regarded as the year of the formal birth of university education in Thailand, for it was during that year that King Rama VI founded the first university, Chulalongkorn University, the name being in honour of his father, King Chulalongkorn (Rama V). The establishment of the University was, however, essentially an act of agglomerating the already existing Royal School of Medicine (founded in 1889), School of Civil Servants (founded in 1910) and School of Engineering (founded in 1913). Thus, strictly speaking, the beginning of higher education in Thailand may be regarded as dating further back into the late nineteenth century.

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*The author is Director of the University Development Commission of the National Education Council of Thailand.

Considering the fact that the Kingdom during those years was already in the state of alertness to modernization, it is fairly obvious that the primary objective of the University was to train men who would be needed in the development of the Kingdom. Incentives were provided to attract qualified persons into 'the King's Service'—the Thai expression meaning the civil service. Hence it has been claimed by many that the university system in Thailand started out with an initial aim of training civil servants. 'The trend still lingers on to this very day', went on those critics, 'to the detrimental effect on the university graduate, being, therefore, more of a civil servant type than an intellectual one.'

Chulalongkorn University remained the nation's sole university for over a decade until it was joined by the second one in 1933. In 1932 the country experienced the first political revolution that transformed the government from being one of absolute monarchy to one of constitutional monarchy. One of the outcomes of that political change was the creation of the second university—Thammasat University—to cater for law and social sciences. This pattern of the occurrence of some event within the university system following a major political change was to be repeated over and over as if there were certain inevitable connections between the two. Although this behaviour might seem reasonable for a country with only state universities, the fact still remains interesting.

Advanced Colleges

During the next quarter of a century, the country found itself with a few more universities added to its list. The expansion of the university system during that period resulted from the attempt by several government agencies in order to meet the manpower need of each of them. Thus the Ministry of Public Health established the Medical University, to be later named Mahidol University, in 1942; the Ministry of Agriculture created the Agricultural University, later known as Kasetsart University, in 1943; and the Ministry of Education founded the Fine Arts University, to become Silpakorn University, also in 1943. These universities, in actuality, were more like advanced colleges for they were involved with degree programmes of only specific fields as implied by the names themselves. It is of interest to point out, in passing that also during this period there were several technical and professional colleges established but they did not offer degree programmes. Thus the universities, although restricted perhaps to a limited number of fields, were distinctly different from the technical and professional colleges.

At this stage, the diverse nature of the university system is apparent, at least from the point of view that the universities were scattered among several government agencies. The adverse effect of such an arrangement would later make it more desirable to pull the universities together under a single administrative body. In fact this was actually the case not very long afterwards.

There is a case of interest worth mentioning on account of its relevance to later discussion. This was the case of the Thammasat University being outside the civil service system. Traditionally the universities had been strictly within the civil service system enjoying the privileges and suffering the limitations as did any other government unit. Thammasat University, however, was not planned to be one of them as if to be an experimental case. The Thammasat staff enjoyed, among other things, higher salaries than their colleagues in other universities. However, they had to pay the price of job insecurity. The contest between advantages and disadvantages went on for a time and, in the end, the price for the benefits enjoyed proved to be too high, and finally Thammasat University joined the rest and became a truly government unit.

This case is mentioned because later on (in the late 'sixties and early 'seventies) the same question of 'to be or not to be' within the civil service system comes up again. It would be interesting to see to which direction the situation will turn this time.

Uniting the Universities

Another important epoch of the university system in Thailand may be regarded as emerging in 1958, once again following a major political event. The new Government, with its ambitious national policy, envisaged a desirable undertaking to reorganize the then scattered university system. As a result, the five universities were pooled together and attached to a single ministry the Office of the Prime Minister; one degree-granting institution, the College of Education, founded in 1954, was to remain with the Ministry of Education. The main idea of having the universities in the Prime Minister's Office was that such an arrangement would hopefully expedite national development as well as improve the universities themselves.

Education was then under two separate administrative agencies: universities with the Office of the Prime Minister and the rest with the Ministry of Education. In order to guarantee the coordination of educational programmes at all levels, the National Education Council was created in 1959 with the objective of acting as an advisory body for the Government on matters relating to national education policy. In practice, it appears to lean more toward higher education, leaving much of the rest in the hands of the Ministry of Education. With limited authority, the Council finds itself in a rough position even within the university circles. Nevertheless, considerable accomplishments have been achieved during the relatively short period of its existence. For instance, it has been instrumental, through the effort of the Office of the National Education Council, in the establishment of many of the new universities.

Universities Go Provincial

Prior to 1964, all universities had been located in the capital city of Bangkok. The idea of having universities in the provincial areas was however contemplated by the Government as far back as in 1941. Unfortunately the Second World War made it necessary to postpone the implementation until more than two decades later.

Towards the middle of the 'sixties, many factors led to the desirability of creating provincial universities. As the country was already having sectional development projects, one for each of the three main regions outside the Central Region, the Government decided to launch the establishment of three universities, one for each of the regions, within the shortest possible period. The first provincial university was then founded in 1964 in the City of Chiengmai for the Northern Region. Within one year the second provincial university was established in the City of Khonkaen for the North-eastern Development Region. These universities bear the names of the cities in which they are situated. Finally, the Prince of Songkla University was established in 1968 with one campus in Songkla and another campus in Pattani in Southern Thailand.

The fact that three universities had been created within a period of less than a decade and also in areas remote from Bangkok brought along a few difficult problems, notably those which concerned the recruitment of faculty staff. The provincial universities are still plagued by this difficulty to this very moment.

The burden on national resources was further increased when, during the same period toward the end of the 'sixties, two degree-granting institutions were started, both being unique in their own ways. One was totally a postgraduate school in development administration, called the National Institute of Development Administration; the other was a rather singular institution an open university named Ramkhamhaeng University.

University Education for All

After a long period (slightly over a decade) of the absence of constitutional governance, the country finally gained back the democratic system of government just before the 'seventies. There was a nation wide mood of democracy, of equal opportunity which soon reached higher education. 'After all, of what harm would it be if as many people as possible have education up to the university level?' ran a newspaper editorial. The result was Ramkhamhaeng University with its first enrolment of 40,000 students in 1971. Again we have another evidence of higher education and political co-evolution. This idea of the so-called scholastic market-place was not, however entirely new, for an almost similar situation was once present at Thammasat University during its early days. It was later abandoned when the University chose to go for quality.

The Picture at Mid-1972

With the brief summary of the historical development of the university system as a background, it is perhaps appropriate at this point to give some of the pertinent facts for a clearer view of the present status of the Thai university at half-way through 1972, the year which may well be a crucial beginning of another era of higher education in Thailand. For at this very moment, the country, following the Revolution of November 1971, is in the process of reorganizing the government administrative system of which the university system is a part.

The period of some fifty years has brought Thailand to the present stage of having a dozen state-supported degree-granting institutions which are all referred to as universities. There are, in addition, six private colleges which are in their second year of operation and involve less than 3 per cent. of the total number of 100,000 university students (including the Open University). A regional postgraduate engineering school, the Asian Institute of Technology, is located near Bangkok and was formerly known as the SEATO Graduate School of Engineering.

Some Statistics[1]

The following quantitative information is given for the purpose of providing the reader with an idea of the order of magnitude being involved. The information is related to data surveyed for the academic year 1971 and does not include those of the Open University. Most of the figures have been, for the present purpose, rounded off.

There were 64,000 students for the total population of 35 million. The teaching staff consisted of 5,500 full-time and 2,000 part-time instructors, giving an overall ratio of 1:12 for full-time staff to students. The total expenditure budget provided by the Government was 850 million baht (approximately 20 baht = 1 US dollar). This represented about 3 per cent. of the total national budget and two-thirds of a per cent. of the gross national product.

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[1] Based on figures from *Educational Report: Institutions of Higher Education, Thailand, 1971*, published by the Office of the National Education Council, Bangkok, 1972.

Of the 64,000 students, about 60,000 were at the undergraduate level, 33 were following doctorate programmes, the rest being at the master's degree level or the higher certificate level. The student ratio of male to female was 3 to 2. The distribution of students in the various fields of study, based on the Unesco classification, was, in decreasing order: education, 30.3%; social sciences, 21.5%; medical sciences, 10.9%; engineering, 8.5%; humanities, 6.9%; agriculture, 6.5%; law, 6.2%; natural sciences, 4.7%; military and police, 3.1%; fine arts, 1.4%. The total number of graduates (for the 1970 academic year) was 12,500, divided into: diploma, 14.4%; bachelor's degree, 78.1%; higher certificate, 3.0%; master's degree, 4.5%.

The average tuition fee is less than 1,000 baht per year and the total amount of scholarships (for 1970 academic year) was worth four million baht.

Of the 5,500 full-time teaching staff, the academic qualification distribution was: doctorate, 8.8%; master's degree, 38.0%; higher certificate, 3.2%; bachelor's degree, 48.2%; lower than bachelor's degree, 1.8%. It is to be observed that half of the permanent teaching staff had bachelor's degree qualifications or lower. In the 1970 academic year, the staff were awarded scholarships and fellowships amounting to 9 million baht. The overall ratio of male to female staff was 6 to 5.

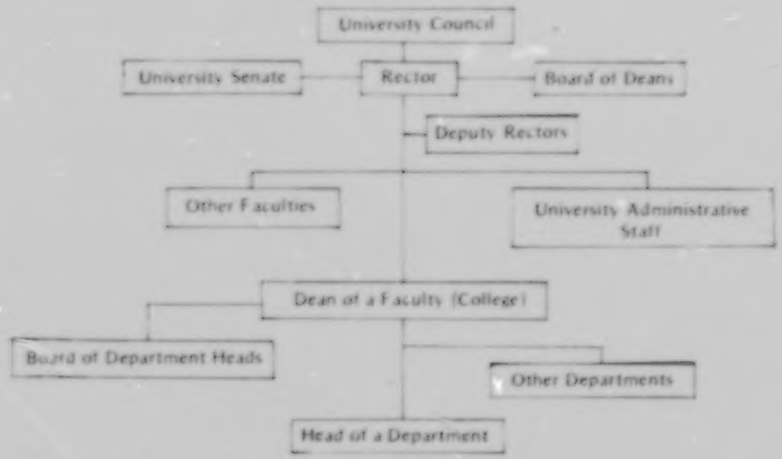
Of the 850 million baht budget, 38.9% was for salaries, wages and other remunerations, 28.9% for construction, 21.9% for equipment, materials and supplies, and 10.3% for other expenses. The total revenue earned from fees, donations, etc., amounted to 53 million baht, exclusive of the budget from the Government. Research work by university staff was worth 21 million baht for the 1970 academic year. This represented about 2.5% of the total university activities (using the total budget of the universities as representing the total university activities).

Some Additional Factual Information

Subject to the imminent reorganization of the government administrative system previously mentioned, the present overall university system is briefly as follows. Ten state universities, including the Open University, are administratively under the Office of the Prime Minister. Two degree-granting institutions, the College of Education and the King Mongkut's Institute of Technology, are attached to the Ministry of Education, and another one, the Military and Police Academies, with the Royal Armed Forces. The rest consist of six private colleges and a regional postgraduate engineering institution – the Asian Institute of Technology.

Academically and in matters concerning major planning, the universities are coordinated through the National Education Council with other government agencies concerned, such as the Budget Bureau, the National Economic Development Board, the Civil Service Commission, the Department of Technical and Economic Cooperation and so on.

With respect to a typical internal organization, a brief description may perhaps be represented by the chart below; the necessary details will be mentioned in connection with each discussion of separate issues in the subsequent sections.


University Council
University Senate
Rector
Board of Deans
Deputy Rectors
Other Faculties
University Administrative Staff
Dean of a Faculty (College)
Board of Department Heads
Other Departments
Head of a Department

A LOOK AT SOME OF THE ISSUES

Undoubtedly many of the issues to be discussed in this section will basically not differ from those anywhere in the world. The attempts to solve them are, however, probably peculiar to each country and may thus be justifiably of some interest to the present discussion. Some of the main problems in Thailand will be presented in the following paragraphs.

Over-demand or Under-supply

Although the prevailing public attitude of equal opportunity for university education is not itself a bad idea, particularly for a developing country, it unfortunately brings along a host of problems as if they were necessary evils

One obvious price is the high cost of higher education. A rough estimate from the figures, previously given, of educating 64,000 students at a cost of 850 million baht indicates an average of over 13,300 baht per head while the per capita income of the nation was only around two to three thousand baht. Surely, with just less than 1,000 baht for the annual tuition fee, there must be a limit as to the extent of university education Thailand can afford.

The question of insufficient employment for university graduates is also becoming another threatening problem. This problem has recently crept into the areas, such as engineering, which only a couple of years ago were in great demand for graduates.

In addition to the reason for social demand for higher education due to prestige and better jobs, there exists in Thailand an extra incentive that makes university education more attractive. Traditionally, being in the Government service is quite desirable from the job security point of view as well as that of prestige. A university degree will usually enhance the chance of being a civil servant and in fact also pave the way for individual progress. This special regard for university degrees does add momentum to the quest for higher education.

To cope with this over-demand problem is a difficult task. It involves several directions of effort all of which must lead to creating in the mind of the public the concept that jobs requiring no university degrees are as prestigious and well-paid as degree-requiring jobs. Indeed, there is a grave shortage of skilled manpower of the middle level, for instance, technicians, which the Government is trying to develop through the vocational educational programmes. On the other hand, little has been achieved in the direction of building up incentives to attract people to such jobs.

Looking at the same problem from the under-supply point of view, the undesirable consequences are quite obvious, the most outstanding of which is the shortage of needed human work force for development programmes. In addition, there are other less evident effects capable of causing as much damage. For example, the great expenses involved in large numbers of students being sent abroad because of their failure to qualify for the national university entrance examination have been estimated to be comparable to the annual budget of a fair-size local university — an interesting point indeed to be seriously looked into. For those who cannot afford study overseas, all kinds of problems, mostly associated with waste, may ensue.

Measures towards accommodating more students have been taken through planned expansion of university programmes, especially the new universities in the provinces and the Open University. In the Third Economic Plan of the country, the annual admission has been set at close to 15,000 for 1976 which is the last year of the Plan. The number admitted to the Open University is, of course, unlimited.

In so doing, the Government has to exercise considerable care relative to selecting suitable disciplines for expansion, balancing the relevant factors such as limited resources, costs, employment, all of which hinge on a most important issue of the university system in Thailand: that of planning and coordination.

Planning and Coordination

It is perhaps an accepted truth that one of the most difficult tasks in higher education in Thailand is planning and its associated activities such as coordination.

Historically, Thai universities as previously described originated from various government agencies. Coordination was naturally unlikely to receive sufficient attention. Such unconcerted programmes in higher education, in the face of rising social demand, could lead to an extravagance a developing country with limited resources can ill afford. This fact was recognized in the late 'fifties and as a result the National Education Council was created. Although this coordinating body was, in principle, entrusted with the responsibility for overall national education policy, it has been mostly involved with planning and coordinating the activities of the universities.

The main reason for many of the existing problems in this matter of planning and coordination is due to a combination of inadequate authority of the coordinating body and the momentum carried over from the past with regard to the accustomed autonomy of each of the universities.

As previously mentioned, degree-granting institutions have traditionally been given university status from the beginning. In fact, most of them have actually been so called. In due course each university would arrive at the stage of seeking to become a full-fledged one to be at least worthy of the nomenclature. Besides there exists this increasing social demand to justify expansion of programmes in each of the universities. Furthermore it is believed that the more programmes there are, the better is the academic atmosphere of an institution. Carried away by this line of reasoning, a point may be reached in which damaging duplications may be inevitable.

In view of this, it is perhaps not entirely worthless to ponder over the question of naming. This is not a matter of attaching undue significance to naming but an appropriate naming may sometimes convey certain implications that need constant reminding. For example, if the existing universities were to be regarded as the campuses of the University of Thailand, perhaps more effective coordination and planning for the best interests to the country may be more likely.

At the time of this writing, the Government, in the process of reorganizing the national administrative system, is seriously looking into the coordination aspect of the university system. It is hoped that some measures will be in the offing which will alleviate many of the existing difficulties.

Another issue with regard to coordination is the small degree of formal interaction between the universities and other units, governmental and private, in connection with national development, which is one of the concerns of the Regional Institute of Higher Education and Development. This is probably due to the traditional preoccupation with training programmes on the part of the universities and partly to the self-complacency on the part of the other agencies. More stimulation is needed in this external coordination even when one takes into consideration only one aspect university planning to meet the nation's manpower needs. Close cooperation between the university and the prospective consumers of university graduates will render the planning of the universities more meaningful with respect to supplying needed manpower to the country.

Towards More Academic Freedom

From the previous description of the Thai university system, it is obvious that the university is strictly a governmental unit, subject to the rules and regulations as in any other government agency. This can and does lead to certain detrimental effects mostly with regard to the qualitative aspect of a university.

Needless to elaborate, the problems arise from the restrictions which hamper efforts towards the pursuit of quality excellence. Again the nagging question of how far a developing country can affrod toward quality excellence keeps coming into the scene. The answer to this is never an easy one and prudent balancing of quality *versus* quantity is always necessary for each of the cases considered.

There has been, for quite some time, a cry from some factions of the university circles for moving the university system out of the tight civil service. A fairly elaborate scheme of the so-called 'state-supported university system' had been drawn up and submitted to the Government in 1971. The November Revolution temporarily slowed the progress but the idea has been agreed in principle that the university system ought to be moving in the direction towards the eventual goal of maximum autonomy within broad national objectives.

Although this ultimate stage may take some time to reach, a first step towards it is in the process of being soon realized. The universities will be grouped as a new unit with ministerial status. An opportunity is thus provided for the universities to become separated from other regular units but still under the civil service system. Whether such a set-up will produce the desired result of course depends on a number of factors, one of which is the university people themselves.

University Staff

Environmental conditions do have some influence on people who can adapt, up to a certain degree, to the surroundings. University staff have been in the government service for a considerable length of time. Some of the characteristics may have been so familiar as to come to the point of being acceptable. One of the issues raised in connection with changing to the new university system has to do with the security issue. To those who have probably been conditioned to the point of being complacent with the old system in which job security is practically guaranteed and promotion is based on the number of years of service, the new system will not appear very attractive even though the pay scale may be quite superior to the existing one.

In order to appreciate the situation in which a university instructor is at present, some facts may be pertinent at this point. The starting monthly salaries for the university staff with the qualifications of Ph.D., master's degree and bachelor's degree are approximately US$120, $100 and $60 respectively. An annual increment on the average of 5 per cent. is allowed to everyone unless relatively major violation of regulations has been committed. Without violating regulations, one could eventually reach the top salary of about US$400. Upon reaching the retirement age of 60, one may choose either to receive a monthly pension for life or a single lump sum the amount of which depends on the length of service. The government servant is exempted from paying income tax on incomes from the Government. He has a few minor fringe benefits such as the right to be reimbursed a certain percentage of tuition fees of his children and hospital fees of the family. It is fairly obvious that under such a system the incentive for giving one's best is very limited indeed.

In addition to this, there are a few other obstacles of the red-tape nature which help prevent the pursuit of excellence under the present system. The small extent of research as previously cited is perhaps an illustrative example of these obstacles.

Perhaps while on the subject of university staff a brief mention should be made with respect to an attempt to improve the situation of the teaching staff with respect to scholastic qualifications. This attempt is related to a project called the University Development Programme.

Its creation in 1967 was the result of a desire of the Government in 1964 to raise the qualitative standard of Thai universities. Through several recommendations, the Government finally appointed the University Development Commission with a responsibility of taking necessary measures towards the above-mentioned objective. The Commission recommended that the first step should be the improvement of the teaching staff, about half of which at the time (1967) had only academic qualifications of a bachelor's degree. Without being too ambitious, the Commission decided to limit the programme to the fields that appeared most urgent to the country's development and thus selected the basic sciences, mathematics and economics to start with.

The plan was finally set: to locally produce staff of postgraduate qualifications in the chosen fields as an initial step of improving the universities. Of perhaps equal importance is the hope that the programme will raise the standards of the existing postgraduate programmes which are vital to the university academic atmosphere.

The initial attempt of the University Development Programme then was to strengthen the postgraduate programmes in economics, basic sciences and mathematics in selected Thai universities through coordination and necessary support so as to produce initially master's degree graduates of international standards to meet the needs for qualified staff of the universities, particularly the newly established ones. Simultaneously it is hoped that in so doing the atmosphere of academic excellence will have been initiated in the country.

Over-emphasis on Specialization

There is at the present a growing concern over the narrow interests of the university graduate. The university curriculum, say the critics, is overloaded with specialized subjects with the result that the graduate is not as scholarly as he ought to be. The university training, particularly in technical areas, has been geared towards producing more of a technician than of an intellectual.

There are many who would argue against this criticism by pointing out the preference of depth to breadth in training the graduates. A developing country which cannot yet afford extensive postgraduate programmes does have to emphasize on specialization at the undergraduate level. A liberal arts education programme is not yet appropriate for a country which urgently needs specialists for development programmes. When the country is in the position to be able to afford extensive postgraduate programmes, as is the case with many developed countries, then more well-rounded undergraduate programmes will be suitable. Specialization will then be left to postgraduate programmes.

The right course is probably somewhere in-between the two views. One major shortcoming, however, in the present university education is certain, namely, the teaching aspect is over-emphasized and insufficient attention is given to the learning aspect. The curriculum is simply overloaded with subjects, thus stressing the importance of fact learning with a lot of contact hours of teaching in class. A situation not unlike school teaching is in existence everywhere. Getting through college is almost synonymous with passing examinations by trying to memorize most facts for a few hours. Students may be seen in front of examination rooms trying to memorize notes to the last minute before examination time. This, rather than the previous controversy over specialization, is of graver concern. Perhaps something like the open-book type of examination may be worth looking into in order to remedy the situation.

Related to this problem is also the apparent lack of knowledge of how to teach on the part of the university instructor. At present, no knowledge in teaching methods is required of a university teacher if he is knowledgeable in the subject matter to be taught. It is believed that this condition helps contribute to less effective educational effort at the university level.

Degree or Knowledge

It has been claimed that the majority of university students are after degrees rather than knowledge. Although some of the criticisms have been often exaggerated, there is some truth in the matter. And the students can hardly be blamed for it either. Unless the society places less regard for degrees and more for learned ability, the students' attitude will probably persist the way it has.

A derived effect from this attitude is associated with the tendency to be less serious in their work. Coupled with the traditional examination-oriented pattern of teaching, students spend more effort in play than study. They will, towards the end of the term, cram for examinations just about the only determining factor as to success or failure of study.

Another serious attack on the attitude of university students is in connection with their preoccupation with self-interest. It has been pointed out that many of the better students are more concerned with their own interests and choose training programmes such as medicine, placing personal income above other considerations. After graduation they would even go abroad without paying any attention to fulfilling the moral obligations to the country as expected of them.

All these issues are, of course, most difficult to rectify as numerous factors are intimately involved. In the final analysis, the students, which are the products of education, in a way reflect the nature of what we have been doing.

SUMMARY

There are several issues which are disturbing in the university system in Thailand. In the first place, the quantitative demand for higher education has an unfavourable effect on the quality of the university considering the limited resources available. This may become worse if planning and coordination are not given adequate attention.

The fact that Thai universities are confined within the strict rules and regulations further hinders the growth towards excellence. Hopefully, these problems may be substantially reduced by the reorganization of the system which is being worked out at the moment. However, the system will be only as effective as the people in it. Lasting results can be achieved only through real effort on the part of both staff and students.

HIGHER EDUCATION IN THE KHMER REPUBLIC: PROBLEMS AND ISSUES*

*Sum Chhum***

THE BIRTH OF THE KHMER UNIVERSITIES

Higher education in the Khmer Republic is relatively recent. The oldest university was created in 1954 and the latest came into being only in 1967. Some institutions of higher education were already in existence about ten years before the actual birth of the universities themselves. These institutions of higher education were:

The National Institute for Law, Politics and Economics (1953)
The Royal Medical School (1953)
The Royal School for Public Administration (1956)
The National Institute of Pedagogy (1958)
The Faculty of Arts and Humanitarian Studies (1959)
The Faculty of Science and Technology (1959)
The National School of Commerce (1959).

The Buddhist University was the first university to be established in 1954 and it was followed by the University of Phnom Penh in 1960. A few years later, in 1965, a feverish rush to establish universities took place. As a result, six new universities came into being during that year (see Table 1). The 1965 rush resulted in some unavoidable difficulties. Furthermore the newly-created universities not only undertook higher education training, but also training of higher-level technicians. The advantage of this double training were clearly offset by the confusion thrown into the system by this second type of training which, by prestige, tended to take an academic turn, thus defeating the technical and professional orientation for which it was supposed to strive. This disadvantage, inherent in this system, was pointed out during the 4th International Colloquium on Higher Education held in Manila in March 1971.

PROBLEMS

Problems of the Teaching Staff

The growth of the Khmer universities during 1965-7 was not handicapped by the lack of equipment. On the contrary, all the new technical universities had adequate equipment. In that respect, the Institut Technique Supérieur (an institute of the Technical University of Phnom Penh) could rightly be considered as one of the modern institutions of higher technical education as far as buildings, facilities, and technical and scientific equipment were concerned.

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*This paper was translated from French.

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TABLE 1

UNIVERSITIES IN THE KHMER REPUBLIC

Universities	Special Subjects Taught	Town	Year of Establishment
Buddhist University	Religious studies, Khmer Language	Phnom Penh	1954
University of Phnom Penh (by regrouping the former various institutions of higher education with some minor	Arts, Science, Commerce, Law, Medicine, Pharmacy, Pedagogy, etc.	Phnom Penh	1960
University for Technology	Engineering	Phnom Penh	1965
University of Fine Arts	Classical and Modern Arts	Phnom Penh	1965
University of Agronomy	Agronomy, Rural Engineering, Rural Economy	Phnom Penh	1965
Popular University*	Technical and professional training	Phnom Penh	1965
University of Kompong Cham+	Engineering, Agronomy (activities much reduced since 1970)	Kompong Cham	1965
University of Takeo-Kampot+	Engineering, Science (destroyed by the war in 1970)	Takeo-Kampot	1965
University of Battambang	Engineering, Food Technology (activities much reduced since 1970)	Battambang	1967

*This University is basically a College of Advanced Technology, not involved in Higher Education.
+ Provincial University.

Also, the provincial universities were no less well equipped.

The main difficulty for these universities was created by an acute shortage of qualified local teaching staff. For this reason, foreign lecturers played a dominant role in university teaching, especially in those universities created with foreign aid. Often, this led to disagreement between the universities and the foreign staff over the way teaching ought to be conducted. Thus, harmonization and coordination of efforts became difficult to achieve, not to speak of the different political tendencies with which each of these universities was unavoidably associated.

These difficulties could have been avoided if there had been a sizeable number of qualified local lecturers to make up the core of the teaching staff.

A still more acute problem was a lack of Khmer counterparts who could serve as assistants to foreign lecturers with the view of replacing them when they finally left the universities. These unplanned measures have led to serious consequences at the present time.

After 18 March 1970, as a result of the war, almost 200 foreign lecturers left the universities and the country. The universities' authorities were thus compelled to resort to local graduates working in the public and private sectors to take over the teaching on a part-time basis. This was an improvised measure, but it has enabled the universities to continue their activities. Naturally this was done not without serious effect on the quality of the teaching.

The distribution of academic staff among the various still active universities in Phnom Penh during 1971-2 is given in Table 2. From this table it can be seen that full-time staff represents only 19 per cent. of the total. The consequences can be easily predicted. After lectures, the faculties are almost deserted. Students are practically left to themselves, with virtually no opportunity for consulting with lecturers or to receive guidance in their research work. At the same time, nobody has time to give serious thought to improving or updating the course contents.

However, notable efforts are now being made by the Ministry of Education and Culture for the advanced training of the existing academic staff by sending these people abroad, specially to be trained as university lecturers. A five-year plan, starting in 1972, has been established, by the end of which about one hundred or more lecturers would have been trained to meet the urgent staff needs of the universities.

PROBLEMS OF THE ORIENTATION AND ADAPTATION OF THE SYLLABUS

It is logical that the university syllabus should aim at two things:

(i) training graduates to acquire sufficient scientific and technical knowledge so that they could specialize in a particular field and eventually

TABLE 2

DISTRIBUTION OF ACADEMIC STAFF, PHNOM PENH, 1971-2

Universities	DEGREE LEVELS OF TEACHING STAFF							
	Ph.D. Degree or Equivalents				Master and Bachelor Degrees or Equivalents			
	Khmer		Foreign		Khmer		Foreign	
	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part Time
Phnom Penh University	4	170	5	13	12	145	32	29
Technical University	0	14	1	2	33	144	12	14
Fine Arts University	0	6	0	0	8	48	10	12
	4	190	6	15	53	337	54	55

Source: Office National de Planification de l'Education (ONPE).

undertake research in that field on their own to promote scientific and technological development;

(ii) enabling these specialist graduates to make their contributions to their own country in the area of their specialization.

These two objectives are difficult to achieve simultaneously when the universities are facing major difficulties as the ones described earlier. In addition to these problems, the existing university training is too short to produce specialists. The existing period of training needs to be lengthened by another two years, either at the beginning (i.e. preparatory classes after the Baccalaureat II Examination) or at the end (i.e. Higher Institute for Specialization). For the moment, at best, the system could train engineers to acquire a relatively broad scientific and technical knowledge or technicians well versed in practical technical knowledge. It is also important to avoid the error of letting the technical-professional training slide towards the academic groove. Instead, there should be a close link between the universities and the various professions in the country.

EMPLOYMENT PROSPECTS

No employment statistics of graduates are available. It is therefore not possible to say how local demand is being met regarding the prospects for employment of university graduates. Employers have complained about the lack of competent graduates, whereas the new graduates appear to be impatient at not finding jobs of their choice rapidly enough. Nevertheless, with a few exceptions, every graduate has been able to find a job up to now.

The number of university graduates during 1971-2 is as follows:[1]

1. Higher degrees	
Doctorates, First degrees in Science and Engineering	314
2. Diplomas of Advanced Technology	231
TOTAL	545

At present, holders of diplomas of Advanced Technology are mainly employed in the army which now constitutes the largest market for this category of graduates.

In peace time, before 18 March 1970, these diploma holders were mostly directed to either governmental or semi-governmental industries or enterprises, the reason being that the private sector was then practically closed to them. The reasons for this were and still are, the following:

(i) Protectionist policy adopted by the private sector which wants to have complete freedom in the recruitment and dismissal of personnel.

(ii) Labour laws loosely applied by most private enterprises to the disadvantage of Khmer nationals.

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[1] Non-official: these figures have been obtained directly from each institute of higher education, not including graduates from the teachers' training colleges.

(iii) Scepticism from the part of private enterprises vis-a-vis new and inexperienced university graduates.

(iv) Unwillingness on the part of these graduates to seek employment in enterprises whose employment and salary schemes give only little long-term guarantees to employees.

According to some experts, graduate unemployment should not be a cause for concern. The real demand of the country for graduates would be three times as much if the economy were better organized. Whether this is true or not, nobody could tell for sure. However, available facts seem to confirm the reasoning of the experts because:

(i) graduates specialized in a particular field continue to be much sought after by the big private enterprises;

(ii) not enough electronics engineers could be found to fill jobs offered by the Posts and Telecommunications Department;

(iii) recently the appeal of the Ministry of Education and Culture to unemployed university graduates to come forward and discuss their problems has met with no response due to a complete disinterest on their part.

At the National Colloquium on Higher Education and National Development held in Phnom Penh in December 1971, Khmer specialists in industries and universities were unanimous in recognizing that up to then there were no unemployed university graduates. The problem was rather one of relevance of the training of these graduates to their jobs. This problem has arisen from the following factors:

(i) the economy is not sufficiently organized and, in fact, is completely disorganized by the war;

(ii) university training is not entirely adapted to the real demands of the country;

(iii) unrealistic job distribution exists with respect to the genuine aptitudes of the graduates; and

(iv) there is unwillingness on the part of some graduates to work in their special fields, administrative posts being more attractive.

In the future, even if the war goes on, we think it is necessary to reorganize all the following sectors:

(i) administrative sector (with administration reforms, stricter social and labour laws);

(ii) private sector (with more efficient planning and control, greater participation in the development of the country and in the training of executives); and

(iii) university sector (with more autonomy, more realistic training, more rational management).

PART II

CASE STUDIES OF UNIVERSITIES

MINDANAO STATE UNIVERSITY
A CASE STUDY ON INSTITUTIONAL DEVELOPMENT

*Antonio Isidro**

THE SETTING: LAND AND PEOPLE

The territory of the Republic of the Philippines is composed of three major groups of islands: Luzon in the north, the Visayans in the middle, and Mindanao, Sulu and Palawan, popularly known as the Minsupala, in the south. Mindanao is the second largest island in the archipelago and with Sulu and Palawan they comprise about 11,625,000 hectares or about 39.1 per cent. of the Philippine total land area. Mindanao is divided into several provinces while Sulu, comprising several small islands, extends over 200 miles farther into the south, in the neighbourhood of Sabah, Malaysia.

Mindanao State University is located in the island of Mindanao. It was organized to serve the southern regions of the Philippines as the University of the Philippines (founded in 1908) has been serving mostly the northern provinces of the country.

The south is rich in natural resources as it has unique historical backgrounds. Minsupala has great potentialities for agricultural development. Mindanao particularly has fertile soil and favourable climate for the production of rice, corn, root crops, vegetables, cotton, abaca, coffee, cacao, coconut and ramie. This is the main source for the production of export crops like abaca, coffee, coconut, banana and pineapple. Extensive grasslands in certain provinces like Bukidnon and Davao make them adaptable for the development of livestock industries.

Fisheries resources are abundant in the region. There are several lakes like Lanao Lake, Lake Bulusan and Lake Mainit. Davao Gulf, Iligan Bay, Moro Gulf and Sibuguey Bay constitute veritable rich fishing grounds. The Celebes Sea and the Sulu Sea abound in tuna fish and sardines. Sources for deep-sea fishing in these areas are practically untapped.

Mindanao has extensive forest reserves and is the main source of forest products and lumber for exports. Millions of board feet of lumber are exported to various countries every year. More than two-thirds of the total area is covered with forests.

Mineral reserves are found in several provinces in Mindanao. They consist of iron, coal, manganese, chromite, gold, silver, nickel and copper. Several mining companies are now engaged in mineral exploration and production in the region and extensive search for oil is undertaken in the Sulu seas, particularly around Palawan.

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Extensive industrial programmes are planned for the region to accelerate balanced economic development of the country.

In 1960, the total population of the Philippines was 27,087,685 of whom 5,546,833 were found in Mindanao. By religious groups, the population is composed of Roman Catholics (83.8%); Protestant (2.9%); Aglipayan (5.2%); and Iglesia ni Cristo (1.0%), while Mohammedans numbered 1,317,475 (4.9%). The rest belong to other religions. The Muslim Filipinos are concentrated in the southern regions of Mindanao and Sulu. The estimated population of the Philippines in 1972 is 38,493,000.

The Filipinos — Christians and Muslims — come from a common racial stock, Malayan. But they possess different historical backgrounds. Sometime about the close of the fourteenth century, Islam was introduced in Sulu. Through the Arab traders and later combined with the zeal of the missionaries Islam gained a strong foothold in Sulu from where it spread rapidly to the neighbouring island of Mindanao. In the fifteenth and sixteenth centuries Islam had reached the northern islands of Mindoro and Luzon.

Spain came to the Philippines in 1521, and in 1565 she had established settlement in Cebu. By this time Islam was well established and recognized in Mindanao and Sulu. In the desire to conquer new lands and spread the gospel of Christianity, Spain sent expeditionary forces to Mindanao in 1579 which ushered in the bloody chapters in Philippine history. In defence of their territory the Muslims fought bitterly and drove away their enemy. In retaliation, the Muslims sent their men to the Christian settlements in the north. In the three centuries that followed, several expeditions against the Muslims were conducted by the Christian brothers under the command of the Spanish governors and officers. The Muslims sent their soliders and attacked the Christian settlements as far as the island of Luzon.

In the process bitter feelings were engendered in the hearts of the two segments of the Population. The Christian population considered the Muslims pirates, blood-thirsty marauders whose name 'Moro' as they were called, created fear and flashed an ugly image. They never trusted the 'Moros'. On the other hand, the Muslims regarded the Christians as their enemies and called them various epithets indicating disgust and mistrust. They hated the Christians and considered them cowards for having submitted themselves to the Spaniards. The series of battles between the Muslims and Christians constitute the darkest chapters in the history of Spanish colonization in the Philippines.

The inauguration of the American occupation of the Philippines at the turn of the century did not improve the situation. The American policy anchored on the preparation of the Filipinos for democracy was concentrated on the Christian population of the north where peace was early established. In the first decade, pacification campaign was conducted in Mindanao and Sulu as the Muslims refused to recognize the authority of the American government. Mindanao and Sulu were placed under special agencies of the government for the administration of political affairs. Their efforts to bring the Muslims under the control of the central government in Manila were hardly bearing fruits when Philippine Commonwealth Government was established in 1935 and the War broke out six years after.

Philippine independence was established in 1946 and the Filipino people engaged in the massive programme of development in political, social, economic and cultural fields to ensure the stability and progress of the Republic of the Philippines. It was in the programme and policies of the government that the Mindanao State University was organized to play a significant role in national development.

FOUNDING OF THE UNIVERSITY

The Mindanao State University was founded to achieve political development, social progress, and economic growth.

Considering the historical backgrounds of the country and contemporary incidents related to the Muslim and Christian populations, the government adopted twin movements in its effort to help the people of the southern region. In the mid-'fifties, the Congress of the Philippines passed three important measures. The first measure called for the organization of the Commission of National Integration; the second, the creation of the Mindanao Development Authority; and the third, the establishment of the Mindanao State University.

The Commission of National Integration was intended to take special care of the minority groups, principally the Muslim population. The Mindanao Development Authority was conceived to spearhead the movement for an accelerated economic growth of the region. The Mindanao State University was designed to provide trained manpower for the economic development of Mindanao, Palawan and Sulu.

According to its charter and other pertinent laws, the Mindanao State University has three basic commitments: (i) to accelerate the educational progress of the people of Mindanao, Sulu and Palawan; (ii) to promote better understanding between the people of the north and their Muslim brothers of the south; and (iii) to train manpower for the economic development of the region.

The Mindanao State University was born in great pains, beset by grave problems and difficulties. The Mindanao State University started from scratch.

With P200,000 available in the budget for release, the university administration had to look for an appropriate campus, construct buildings, put up laboratories and a library, recruit faculty members, develop student body, and select the administrative personnel.

After the President of the University was sworn into office on 1 September 1961, his first immediate task was to locate a suitable campus for the university. Since the Charter specified that the institution was to be established in Dansalan (now Marawi City), the selection of the campus site was therefore limited to that locality in Lanao del Sur. At the time Marawi City had a population of about 30,000 composed mostly of Muslims. The city was the site of the defunct Bureau of Non-Christian Tribes and the seat of the military government for Mindanao and Sulu during the American occupation. It had two schools then, one was a high school for the Muslim population, while the other was operated by the Protestant Mission.

With the help of three members of the Board of Regents, the President selected the campus site of a thousand hectares on the shores of Lake Lanao, four kilometres away from the centre of Marawi. The panoramic view is superb as it rises majestically to a height of 2,800 feet above sea level in the midst of flush vegetation with a temperature ranging from 65° to 85° throughout the year. A part of the military reservations, it was ceded to the Mindanao State University first by an executive order of the President and later by a congressional action.

When the construction work started at the site, the members of the community rose to a man to register their opposition. The people and their leaders were alarmed at the news that a university was to be established in the city. The opposition was understandable. The Muslim leaders had regarded this land as their own property inherited from their ancestors from generation to generation. In the second place, the traditional attitude of the Muslims towards Christian education was not favourable; they had always resisted the organization of the public school system in the belief that is an instrument for their conversion to the Christian faith.

When the opposition to the establishment of the University in the chosen campus became manifest, the University President called the sultans and some *datos* of the region to a conference during which the purposes of the University were explained. The Muslim leaders objected on the grounds that the Philippine government had no right to take possession of the land. They claimed that the Muslim population had always resisted any attempt to dispossess them of the land during the 400 years of Spanish colonization and American occupation. They reasoned out that since the Philippine government had never successfully occupied the land all these years, the Mindanao State

University had no reason to occupy it.

As the opposition was vehement, it was thought for a time that the proposed organization of the University could not go through. The University President, however, explained that the intention of the government was to help the people establish an institution that could train their sons and daughters to become lawyers, engineers, doctors, and leaders of the country. He made it clear that there was no intention whatsoever on the part of the government to take the land away from them but only to use it for their own benefit and interests. The University President further argued that the leaders had to make a choice whether to continue possessing the land to raise corn, rice and peanuts, or to allow the Mindanao State University to function so that their sons and daughters could become professionals and eventually assume leadership not only in their region but also in the country as a whole.

After a lengthy discussion, the assembly decided to yield the possession of the land to the Mindanao State University on two conditions: first, that the owners of the land would be compensated for the value of the property; and, second, that any expansion beyond the area where the buildings were to be erected had to be negotiated, and that the members of the community should be given employment both during the construction period and after the establishment of the University should their qualifications fit.

The University President finally accepted the conditions and the building construction began in earnest.

CONSTRUCTION OF THE BUILDING

The construction of the buildings and other facilities began under unfavourable circumstances: fund limitation, political pressure, and time constraint to establish the university within a period of six months. The University was allocated P200,000 for its building on a site where everything had to be started anew. An access road had to be built, a water system installed, light and electricity provided, grounds levelled, and other basic requirements undertaken. There was apprenension that these undertakings could be accomplished in time.

The political pressure stemmed from a desire to establish strong credibility among the Muslims who had been repeatedly frustrated by the broken promises of the government. It was currently thought that since September and October were the months when the political campaign was at its height in 1961, the establishment of the University was merely a political gimmick of the Nacionalista Party to gain the votes of the Muslim population. It was, therefore, necessary to redeem the pledge that the University was going to be established and operated regardless of the political fortune of the President of the Philippines and the ruling power.

To meet the exigencies, arrangements were made with the authorities of the Armed Forces of the Philippines for the manufacture of thirty units of the pre-fabricated *barrio* school type.

In assembling the pre-fabricated materials, the problem of skilled labour came up. This was something new in the locality where the people did not even have the basic skills in carpentry. The most that the local labour could provide was in preparing the ground, digging the canals, and levelling down the areas. Skilled labour had to be imported from the nearby cities of Cebu and Iligan. Through the leadership of the engineer-architect who supervised the work, the construction phase went on in spite of numerous misunderstandings with members of the community regarding the employment of labourers. Out of the pre-fabricated units, classrooms and offices, dormitories for the boys and the girls, and the cafeteria and other service facilities were constructed.

On 13 June 1962, or approximately six months from the acquisition of the campus, the Mindanao State University became a reality as it opened its doors to 282 students.

DEVELOPMENT OF STUDENT INTAKE

A serious problem that faced the University concerned student enrolment. The traditional attitude of the Muslims toward public education was one of indifference, if not antagonism. Over the years they had regarded public education with suspicion, even thinking that the government schools were but instruments for their conversion to the Christian faith. Some materials in the textbooks of the elementary schools were considered against the traditions and customs of the Muslims. Co-education in the public schools had never been accepted by them. There was a general apprehension of the students from the surrounding provinces in Mindanao that the Mindanao State University was not a safe place for study. The Christian students thought that mingling with the Muslim population in Marawi would be extremely dangerous. Transportation facilities to Marawi were very inadequate and the University site was quite far from the different towns and cities. For a student from Iligan City, for instance, to go to Marawi which is 37 kilometres away, he had to take a bus ride over bad roads for about two hours. Only two high schools – the school conducted primarily for Muslim boys and girls and the Protestant Mission school — were opened at the time. They had small enrolments.

Under the circumstances, the University administration devised ways and means to attract students. As soon as the buildings were underway in construction, a campaign of information was launched. Announcements were made of the opening of the classes in the new institution. Press releases were sent out in the metropolitan papers. The University availed of the services of the American Peace Corps volunteers. Eight volunteers helped in the campaign for information. They went to different places and spoke over the radio, addressed civic organizations, and appeared at high school convocations. The University President himself campaigned for enrolment in the important centres of population in Mindanao.

The sad part of the campaign was that in almost all the places where the idea of opening the University was brought up, the unanimous response of the students and the parents was one of apprehension and fear. They were afraid of coming in direct and close contact with the Muslim population in the University.

It became abundantly clear that for the purpose of building up a sizeable student body, some innovative measures must be devised. A broad and comprehensive system of scholarships was therefore inaugurated. The scholarship provided for free board and lodging on the campus as well as exemption from tuition fees and all other fees and free round-trip transportation between the homes of scholars and the University during vacation.

The principals of the high schools in the Minsupala region were requested to send their best graduating students who represented the highest 5 per cent. of the graduating classes. The scholars were chosen from the highest 10 per cent. of the successful candidates who passed the scholarship examination.

The scholarship system has become the main source of the student clientele in the Mindanao State University. To increase further the student intake, two other measures were adopted. The first was the organization of high schools and the second, the adoption of the college-bound projects.

In the first instance, a preparatory high school was organized in Marawi City itself not only to attract a wide coverage of students but also to provide the University with a continuing supply of students. A building was rented in the downtown district of Marawi for the school. The organization of a high school in Marawi was later complemented by the opening of community high schools in the different towns surrounding Lake Lanao. The community high schools were similar to the *barrio* high schools in the Christian communities. With the cooperation of the principals and the supervisors of the public schools, the classes were conducted in the elementary school buildings by teachers recruited from the elementary schools and possessing the appropriate qualifications for high-school teaching. As the years went on more and more community high schools were organized not only in the towns of Lanao del Sur but also in selected towns of Lanao del Norte, General Santos in Cotabato, and the Sulu Archipelago.

Three years later, the college-bound projects were instituted for the purpose of providing supplementary or remedial instruction to Muslim students intending to enroll in the University. The students were given special training by the University under the college-bound projects supported by the Ford Foundation. Special classes were opened for them especially during the summer, where remedial instruction was imparted in the areas of their weaknesses in preparation for their admission to the Mindanao State University.

Bearing in mind the fundamental objectives of the University — to promote better understanding between the Muslims and the Christians — every measure was adopted to overlook their religious affiliations and to stress their similarities as Filipinos. Assigned to their respective classes as students of the University, both the Christians and the Muslims were taught together in the same classrooms. In the dormitories, students from the different places were assigned to the same room. By university regulation no two or three students coming from one city or province could live together in one and the same room. In the library, the students were given the freedom to choose the books that they wanted to read without any distinction or discrimination. In the cafeteria, the students were made to choose the food they wanted.

The rules of the University also prohibited the use of such expressions as *Muslim minority* or *cultural minority*, terms commonly used in the newspapers and publications outside Marawi City.

The University prohibited the organization of students based on linguistic, regional, or religious considerations. The organization of the Greek-letter societies and fraternities was also prohibited because they could contribute to the creation of different classes which might lead to the separation and distinction of the various student groups. The general underlying principle in this matter is for the student body not to be identified in one way or another and to develop a feeling of national identity.

FACULTY RECRUITMENT, DEVELOPMENT AND RETENTION

One serious problem that beset the Mindanao State University was the recruitment, development and retention of the faculty. In Marawi City and the neighbouring towns — and for that matter in the entire Mindanao area — very few were qualified to be members of the faculty of the University.

The problem of recruitment outside Marawi City and Mindanao was compounded by the inadequate supply of faculty materials in the other regions. The University of the Philippines was then in the midst of undertaking its own faculty development to replenish those who perished or resigned during the War. The private colleges and universities were not good academic markets. The sectarian institutions were generally staffed by members of their own religious orders and by lay faculty members closely attached to their respective religious organizations. In the non-sectarian colleges and universities a large number of the faculty members were on a part-time teaching basis and did not care to leave behind their offices nor their professional clientele in exchange for an adventure in Mindanao.

A greater deterrent was the psychological problem. Fear of living in a frontier area was a crucial factor to some faculty members. In several instances, well-known scientists and professors of the University of the Philippines went back on their word to join the staff of the Mindanao State University because the members of their families would not join them in a new area which, historically, has created fear in the hearts of Christian Filipinos.

By fortunate coincidence, a strong faculty group was assembled on time. A young man who is a holder of a Doctor of Philosophy degree from a university in India readily joined the faculty. An American graduate of a university in Japan who was married to a Filipino and employed as an expert in fisheries development in Manila was taken for the science department. A newly-married couple trying to establish a new home was attracted to the University: the Indonesian husband was a Master of Arts in Political Science from Cornell University and the Filipino wife, a holder of a Master of Arts degree in English from an exclusive women's university in the United States of America. Another couple who was to return to the Philippines after their teaching stint in the United States was recruited and taught sociology and English subjects. The husband was a holder of a Doctor of Philosophy degree from the University of California, while the wife held a doctorate degree from the University of Michigan. A man from the National Economic Council who had a Master's degree in statistics handled mathematics, while a Muslim graduate of the Philippine Normal College who was about to complete his course leading to the degree of Master of Arts was appointed to teach English. Another man from Marawi City and also a Master of Arts in sociology from Kansas University was induced to resign his membership from the Board of Regents in order to help his people. A young Stanford University graduate with a degree of Master of Arts who had been the registrar in a vocational school in Marawi City served as the registrar and at the same time handled the first courses in English and education. A graduate of the University of the East who is a Certified Public Accountant served as a business administrator. Supporting this faculty group were six Peace Corps volunteers of varying training in the different disciplines who accepted assignments in the Mindanao State University.

One of the cardinal principles in the development of the faculty was that only the best and most qualified in the judgment of the University President should become a member of the teaching staff of the new institution. This factor was important not only because of the ordinary requirements for an institution but more important because of the need for building up the reputation of a true and genuine university.

With the recruitment of the faculty members over, the problem of their retention set in. For some faculty members who had served their term, the matter of retention exerted a very important pressure. The site of the University had no cultural or educational attractions to offer, except for the fact that the campus has an ideal climate of eternal spring and a beautiful scenic view of the lake. The campus could not offer much to educated persons with extensive training and great interest for cultural advancement. The evenings did not give the professors much time for reading. The light was poor and limited as the power for the classrooms and the dormitories had to be conserved. The light in the evening was extinguished after meal time and made available again in the early morning for the preparation of breakfast in the cafeteria. Social life was practically absent. A movie house which [illegible] common standard was rated fourth class was the only available place for recreation in the city. Food supply was inadequate and Marawi City itself did not have much to offer in either quantity or variety. For marketing, the housewives had to go to Iligan City, 37 kilometres away over bumpy roads. The university itself could not provide adequate transportation of the families who lived in the campus. Its only bus was assigned to marketing chores on Saturdays. Housing for the faculty was inadequate. Some of them had to seek quarters in the houses near the campus and in the cottages of the Philippine constabulary unit stationed in Marawi City. Houses with adequate basic facilities were rare and the faculty had to double up in small houses. Those faculty members who stayed in the campus were accommodated in the dormitories and lived among their students.

For those who were fortunate to secure faculty cottages, the occupants spent their time after their academic or classroom assignments doing some gardening. They had home lots of 1,000 square metres in area, enough space to plant vegetables and fruit trees for their own home use

To give relaxation to the employees and the faculty members, socials like dances were conducted on Saturday evenings immediately after the dinner in the cafeteria. A golf course with three holes was constructed to attract the faculty members and the students to spend their weekends playing golf.

In this huge task, the great propelling idea was the desire to serve the people and spread the light of education in this section of the country. With dedication and loyalty unparalled in the history of higher education in the Philippines, the pioneering faculty members stuck together and stood firmly in the difficult and trying hours of the institution if only to record the fact that it was their sense of service, their devotion to duty, and their patriotism that made them stay and stake their professional career at a great personal sacrifice.

With the nucleus of the faculty organized, the next problem was the development of the staff to meet the expanding programme. For those who were recruited but did not have the adequate qualifications, the University inaugurated a continuing in-service training which took the form of a summer programme on the campus. Advanced studies during the summer months were taken up in the University of the Philippines and the other well-known institutions in Manila. Attractive fellowships were offered to enable those faculty members with only a Bachelors degree to obtain at least a Masters degree. In addition to their salaries, the university fellows were given stipends for tuition fees, textbooks, and board and lodging at the place of studies. The university fellows were sent out on a contractual basis which provided that upon their graduation with the masters or doctoral degree, the fellows had to serve the University two years for every year of study.

After the first four years of dependence on outside sources, the University began to build its faculty from its own graduates. Among the early graduates, only those who graduated at the top of their classes with either *summa cum laude*, *magna cum laude*, or *cum laude* were immediately invited and taken in as faculty members of their *alma mater*. This bunch of new faculty members had an advantage because of their experience and adjustment to the cultural, social, and educational *milieu* in which they studied. They knew the conditions in the University and all that they needed was advanced training.

The programme of faculty development was considerably strengthened by the addition of fellowship grants from external sources. As soon as the University gained recognition in the academic community, external assistance was secured for faculty development. The Ford Foundation granted scholarships for faculty training to complement the development of the science programme which it had accepted to assist. The East-West Center established a faculty development programme which provided twenty-five slots over a period of five years for the training of the faculty of the Mindanao State University in return for research facilities of scholars from the East-West Center. The Asia Foundation also contributed its share of assistance. The Colombo Plan and bilateral arrangements with Australia, New Zealand, Netherlands, and Japan likewise provided a training programme for the faculty members in the different ranks.

While the young graduates and the new recruits of the Mindanao State University were undergoing training in the United States and the other countries, Peace Corps volunteers temporarily took their places. These assignments of the Peace Corps volunteers in the Philippines coincided with the period for the fellowships to the faculty members of the University.

To compensate for inadequacies the University administration endeavoured to provide some measures of attraction. Faculty housing was developed. The science laboratories were equipped for research and more library facilities were built. The university also gave assistance to the children of the faculty members in the form of free education in the nursery and in the elementary and secondary schools established on the campus. Salary scales higher than those available in other places in the Philippines were adopted and abundant fellowships were created. Travel abroad was made an incentive.

CURRICULUM DEVELOPMENT AND ACADEMIC PROGRAMMES

The charter of the Mindanao State University authorizes the establishment of sixteen faculties ranging from the liberal arts to medicine, veterinary science, and the fine arts. After considering the purpose of the University and the available resources both in manpower and material facilities, the University administration established an order of priorities for the different courses. For the first priority, the Board of Regents authorized the opening of the College of Liberal Arts, the College of Social and Political Science (later renamed the College of Community Development and Public Administration), the College of Education, and the Institute of Research for Filipino Culture. These courses which began functioning in the first year of operation had common requirements which at the same time provided the service courses for the professional colleges. Only freshman subjects were offered in the first year.

The second group of priorities was made up of the College of Engineering and Architecture, the College of Agriculture, the College of Forestry, the College of Fisheries, and the College of Business Administration. This group consisted of faculties intended to train the manpower for the economic and social development of the region.

The third priority consisted of the College of Law, the College of Nursing, and the College of Veterinary Medicine. The fourth priority had the College of Medicine and Surgery, the College of Pharmacy, the College of Dentistry, the Conservatory of Music, and the School of Fine Arts. Both the third and fourth groups were programmed but they were never implemented in the past ten years of operation. The university programme was concentrated on the basic courses required for the economic development of the region. This is not to say that courses in medicine, pharmacy, dentistry, and veterinary sciences are not important. They are. But the university resources and the peculiar difficulties attendant in the locality made their establishment difficult.

The establishment of the College of Medicine and Surgery was made very urgent considering the conditions of health and sanitation in the area. But its establishment required vast resources of money and faculty members who were not available in the community at the time. While the College of Law was also considered important, there was a sense of greater urgency for the other courses.

The Institute of Research for Filipino Culture was established simultaneously with the opening of the University because the University charter calls for research in the cultural heritage of the region which could provide the basis for a better understanding of the Christians and the Muslims.

The College of Liberal Arts was first organized to provide the preparatory training for the development of the professional courses. The course offerings laid strong emphasis and definite orientation on mathematics and the sciences.

To secure a broad and solid base for science development, project proposals were submitted to the Ford Foundation for assistance to the Mindanao State University. After some negotiation, the Foundation agreed to provide a programme of assistance for an initial period of providing laboratory science equipment for the basic sciences: chemistry, biology, physics, and mathematics; providing a group of American professors who could assist in the organization of the curriculum, the setting-up of the laboratories, and the training of local personnel for the maintenance and operation of the equipment, and creating a number of fellowships for young faculty members who were to take advanced studies in American universities.

During the period of the grant, which was renewed twice, American experts, professors and leaders in their respective fields were sent to work for and help the Mindanao State University. Besides teaching two or three subjects, they devoted much time in training the local faculty members and in assisting in the organization of the curriculum. Young, promising and brilliant faculty members who are graduates of the Mindanao State University as well as from other insitutions of higher learning were selected for the science faculty.

The science building complex was constructed with the assistance of the USAID programme under Public Law 480. In the science building the equipment and laboratories given by the Ford Foundation were housed.

The College of Education was organized for the purpose of meeting the actual demand for teachers in the locality and of providing manpower for the source of future students of the university. It became evident that for the University to serve its purpose, it must have a wide base of students preparing to go to the University. The first programme, therefore was the training of teachers for the elementary and secondary schools. For this purpose, both an in-service and a pre-service training programme were instituted. For those who were already in the service of the public elementary schools in the different towns around Lake Lanao and in the Muslim provinces, the administration established from the start the University of the Air which gave a series of lectures on professional education, monitored from DXIL radio station station in Iligan City. Every evening, faculty members from the College of Education travelled from Marawi to Iligan to give lessons on the professional courses in education. The University of the Air was later transferred to the campus of the University with the establishment of a radio station with the cooperation of the Philippine Broadcasting Service.

Another type of in-service training was conducted on the campus on Saturdays and Sundays. The teachers from the different towns around Lake Lanao who had expressed their desire to continue their education were fetched in the early mornings of Saturdays and Sundays by the university bus from their towns to the university campus. During the week-ends, the teachers were given special courses in the art of teaching. A summer programme for teachers became a regular feature in the University. The teachers from the regions enrolled to improve their training.

The University also made arrangements with the Department of Education in Manila for the training of prospective administrators and supervisors of public schools in the region. The MSU-Department Leadership Project aimed to train leaders in education. The University provided the teachers selected from the different Muslim regions with scholarships consisting of free tuition fees, free board and lodging, and free transportation fares from their homes to the University and return. For its part, the Deparment of Education allowed the teachers to go on leave with pay. As this programme worked well over the years, the teachers trained under this leadership programme of the University are now either directing, supervising or administering schools located in strategic places.

The teacher training programme undertaken by the University was not confined to the elementary and secondary school teachers. With the assistance of the Ford Foundation, it developed a masters programme for the college teachers of physics. A professor of physics was recruited by the Ford Foundation to help in the programme while a Filipino counterpart who was Doctor of Science in Physics was employed by the University. They jointly developed a programme that gave the teachers the needed training for teaching physics in the colleges of the region.

The pre-service training provided scholarships to the teachers in the Muslim area. The programme of teacher education led either to the degree of Bachelor of Science in Secondary Education or to that of Bachelor of Science in Elementary Education.

The College of Community Development and Public Administration was originally organized under the name of the College of Social and Political

Science. Its establishment was dictated by special reasons. Basic motivation was the realization that an underdeveloped community, such as Lanao del Sur, Lanao del Norte, and the other Muslim areas, required the training of the people who could provide the necessary leadership in the improvement of the rural communities. As in other underdeveloped countries, the rural areas constitute the weakest link in the social and economic development of the region.

It was thought that the University must train the leaders which could awaken and give guidance and assistance to local leadership. The University must train leaders who could create incentives and arouse the interest in self-help in the various aspects of community development.

Designed primarily for the economic development of the region, the Mindanao State University focused its main attention on the development of the College of Agriculture. Considering the vast resources of the area and in compliance with the legislative mandate, the University administration decided to give early and great emphasis on the training of agricultural workers. The course provided for a four-year programme leading to the degree of Bachelor of Science in Agriculture.

To meet the particular needs of the region, the University likewise introduced several projects and programme which supplemented and complemented the four-year degree programme. One of them was the two-year programme leading to the diploma in agricultural technology. The two-year programme was devised to prepare the students for actual work in the islands. The students were provided with cottages on the campus so they could perform actual farming for at least half of the day while devoting the remaining half to their academic work. The farm site was designed to provide a model for actual living on the farm. Each student cottage was provided with a sufficient area which enabled the occupant to plant vegetables and raise chickens and pigs for home consumption. The students were also taught skills in the manufacture of home appliances and furniture, the purification of the water supply, the construction of sanitary toilets, and in building their homes.

In cooperation with the Land Authority, the government agency in charge of land distribution and the promotion of migration from the congested areas to the scarcely-populated regions in the south, the course was designed to give the students an insight into the life in the settlement project. In an agreement between the Mindanao State University and the Land Authority, the students were given the necessary training in the skills demanded of settlers in the frontier area and developing a virgin field into an ideal site from the social and cultural standpoints.

Under this agreement, a graduate of the agricultural technology course was given by the Land Authority a 24-hectare home site located in any land settlement project for him to cultivate. Upon his graduation, he was given the title to the land.

The College of Agriculture engaged also in a work-study programme designed to help the students earn a living while they pursued their studies in the University. A student was assigned a plot on the campus for him to work on and out of whose products he could earn a little income. The students were advanced seed money by the University. The harvest, whether of vegetables, fruits, chickens, or pigs, was sold to the cafeteria of the University. The students either got cash for the products sold or the amount was converted to pay for meals in the cafeteria. Some students who did not like to work on the farm were given opportunities to work as gardeners in households of faculty members or of administration employees.

The College of Agriculture also served as a demonstration centre for modern farming in the community. It made known to the farmers in the surrounding areas that the University was ready to teach them the scientific cultivation of corn, peanut, rice, and vegetables. From time to time, the farmers went to the university campus to see actually the advanced methods of cultivation, the use of fertilizers, the proper selection of seeds, the preparation of the soil, the application of insecticides, and the adoption of scientific techniques. In a nutshell, the College of Agriculture did not only train the students but also served the farmers in the community.

Another college that was organized with the inauguration of the University was the College of Fisheries. The College of Fisheries offered a four-year course leading to the degree of Bachelor of Science in Fisheries and also a two-year programme leading to the Diploma in Fisheries Technology. The development of the College of Fisheries in the early years was undertaken with the assistance of a Japanese expert from the University of Kogoshima in Japan.

In the fishing village, which was constructed, the fisheries students lived in the cottages built for them. They were not only made acquainted with the methods and techniques used in the local area but also learned the more advanced methods in fisheries technology. The fishponds on the campus served as the distribution centre for the fingerlings of carps. In addition to the fishponds on the campus, another site was developed with the cooperation of the Bureau of Fisheries into a demonstration fish farm for the benefit of the members of the community. The Bureau provided the expenses for the construction of experimental fishponds and the cottages while the University provided the site and assisted the Bureau personnel in the mangement of the fishponds.

In order to train the students for fishing in brackish water, a ten-hectare site was acquired from the municipality of Naawan, which is sixty-five kilometres away from the Mindanao State University. The students constructed a fishpond for milkfish and prawns to enable them to acquire training for this type of fishing. The University bus transported the students to the Naawan experimental station for training and observation.

For training in deep-sea fishing, the College established a branch in the municipality of Bonggao in the Sulu archipelago. The students were trained in deep-sea fishing techniques and fish preservation with the cooperation of the Bureau of Fisheries. By an act of Congress, the Sulu College of Technology and Oceanography was established in Sulu as a part of the Mindanao State University. The purpose of the College is to expand its fisheries programme and to undertake researches in oceanography in the surrounding seas.

Another important institution designed to accelerate the economic development of the region was the College of Engineering. Its primary purpose was the training of manpower for the industrial development of Iligan and other cities in the region. The College offered a five-year degree course leading to the Bachelor of Science in Engineering with specialization in civil, electrical, mechanical, and chemical engineering.

In addition to the regular five-year course in engineering, a two-year programme in engineering technology was organized under the Colombo Plan. For a time the College of Engineering technology course was under the leadership of a technician from New Zealand while a promising faculty member was sent to New Zealand to train as a technician. The first programme provided training to the personnel of the University in the various aspects of its needs. Later the course provided training for the technician workers needed by the community.

By legislative action, the University acquired the Iligan Vocational School of the Bureau of Vocational Education. Converted into the Iligan Institute of Technology, it got its support partly from the city government of Iligan. The Institute provides the technician training for the growing industrial centre of the south. Because of cheap and abundant electric power from the Maria Cristina Falls, several industries are already established in Iligan like the Iligan Integrated Steel Mill, cement factories, carbide and fertilizer plants, a paper pulp factory, and flour mills.

The training of the students in the technician programme conducted at the Iligan Institute of Technology was undertaken with the assistance of experts from the Netherlands who were acquired under the Colombo Plan. With the intensification of the vocational training programme for the out-of-school youth, the Iligan Institute became the centre for training of out-of-school youth. Short training programmes have been instituted for those who wanted to acquire skills for service in the community.

PRESERVATION OF FILIPINO CULTURE AND EXTENSION OF KNOWLEDGE

As provided for in its charter, the Mindanao State University is committed to the preservation of Filipino culture and the extension of knowledge. While there is much of the genuine native Filipino culture buried in the history and civilization of the Mindanao region, nothing has been undertaken to unearth the rich culture of the Muslims.

The first concrete measure undertaken by the Mindanao State University was the establishment of the Institute for Research of Filipino Culture. The professors were given ample time and latitude for the pursuit of their research. Their teaching load was limited to a few hours a week in order to give them sufficient time for their study of the culture and history of the region.

The Department of Physical Education undertook the collection of native dances, folk songs, and folk dances from all parts of Mindanao, Palawan and Sulu. The studies of the indigenous dances and songs eventually culminated in the formation of the Daragan Cultural Troupe. This organization composed of students selected for their ability to interpret their native dances. Many of them came from the town or the region where the dances originated and they themselves danced dressed in colourful costumes of their own particular locality. They performed several times not only in the different cities of Mindanao but aiso in Manila and the other cities of Luzon.

The University established the Aga Khan Museum with initial funds donated by His Highness Aga Khan IV who visited the University in the early days of its organization. As a parting gift, he donated an amount for the construction of the museum building named after him. In this museum, the University keeps its collection of rare historical relics and artifacts which came from the homes of local Muslims as well as from those of Palawan and Sulu.

The University has started intensive research programmes that have relevance to the needs of the region. The College of Engineering has launched an experiment on soil-cement mixture for road building and low-cost housing construction projects. The poor conditions of the roads in the region impelled the University to develop materials which could be used for the construction of rural or feeder roads. The University also took into account the need for a low-cost housing unit for labourers and workers living in the rural areas.

The College of Fisheries experimented with the growth of oysters imported from Japan. With the cooperation and assistance of the National Development Board, the College also undertook experiments on the propagation of prawns in captivity since both the Iligan Bay and the Pangil Bay nearby abound in prawns. The experiment demonstrated successfully that prawns could be made to propagate in captivity in the fishponds.

The College of Agriculture organized a dairy farm project. With the donation of cows and bulls from the New Zealand government, the dairy farm project was launched for the purpose of determining the conditions under which such a breed could be propagated profitably in the region. Alongside this project was the experiment undertaken with the assistance of the national government for determining the kind of grass appropriate for the feed of the cattle.

The College of Community Development entered into a contract with the Presidential Arm on Community Development (PACD) to determine the appropriate projects that would prove helpful in the development of the Muslim area. The project aims to determine the positive factors that could promote community development as well as the negative social factors that would hinder community development. The project entailed the study of customs, structure and traditions of the locality as well as the introduction of innovative ideas that would be in consonance with the accepted standards and practices of the Muslim population.

The Mindanao State University is now engaged in two community projects: the city planning for Marawi and Iligan, and the development of the watershed area. Both the faculty and students of the University have been commissioned to undertake the city planning for the two cities. Much is at stake in the watershed area study because Lake Lanao, being the main source of the water power coming from the Maria Cristina Falls, is considered the basis of industrialization in Mindanao.

The University is engaged in the extensive reforestation and the preservation of wildlife. Its large collection of Philippine birds serve as the nucleus of its natural science museum for the preservation of animal and plant life indigenous to the region as well as for its use as instructional aids in the teaching of science subjects which are relevant to the fauna and flora in the region.

ORGANIZATION AND MANAGEMENT OF THE UNIVERSITY

The Mindanao State University follows the same pattern of organization and administration as that of most state universities in the United States. The overall control and direction is vested in the Board of Regents composed partly of ex-officio members, such as the Secretary of Education (Minister of Education) who acts as the chairman, the Chairman of the Committee of Education of the Senate and the Chairman of the Committee on Education of the House of Representatives, both of the Congress of the Philippines. The President of the University is automatically an ex-officio member of the Board of Regents. The alumni of the university are given representation on the Board and so is the President of the Philippines. The immediate chief executive officer is the University President who is aided in this work by both the Vice-President for Academic Affairs and the Vice-President for General Administration and Business Affairs.

The University is divided into different colleges which, in turn, are divided into various departments, each representing a discipline. The University is autonomous from the national government and it receives annual contributions from the government for the operation of the University and the construction of the buildings and other facilities.

Through the University President, the Board of Regents submits to the national government its project budget proposal for meeting the ordinary current expenses and also for certain development projects. In addition, it also submits the budget for the construction of buildings, laboratories, dormitories, and other edifices necessary for the operation of the institution. These budgets are submitted to the Budget Commission which, after scrutinizing them, forwards them to the Congress of the Philippines in the name of the President of the Philippines, for due consideration.

Considering the rapid growth of the Mindanao State University, the contribution of the government was never adequate. In order to make up for such inadequacies, the University sought external assistance from different sources. Some of the sources that contributed greatly to the rapid development of the University were the Ford Foundation which assisted in the organization of the science courses that now permeate the entire University; the East-West Center assisted in the training programme of the faculty members; the United States AID extended loans for the construction of the science building, the dormitories, the central library, and other facilities; the Fulbright Programme or the Philippine-American Educational Foundation awarded professorships in physics and mathematics as well as scholarships for faculty members; and the Peace Corps gave enduring contribution in supplying the teachers in the early years of the University when it was in critical need of an adequate faculty. The Peace Corps volunteers went out of their way to participate in the pioneering work which formed the basis of this University. The Asia Foundation granted scholarships for library training in the United States and gave a hundred volumes for teacher education.

The United Nations Development Programmes assisted the University through its World Food Programme, a project that provided food for the scholars who were given meals in the cafeteria. The Unesco provided assistance for teaching training. Through the bilateral arrangements with the other countries and under the Colombo Plan, the University received extensive assistance from the British government through the British Council. British volunteers taught physics, chemistry, and engineering subjects. From the Netherlands government, the University received assistance in the form of visiting professors of economics and technician teachers for the rapid development of the courses in Iligan. The New Zealand government gave fellowships and rendered expert advice for the engineering technician courses and development of the dairy farm. Japan supplied an expert adviser in fisheries development, while Australia awarded a number of scholarships mainly in agriculture and sent teacher volunteers in English.

The University was also fortunate to receive the wholehearted cooperation of the different government agencies: the National Economic Council, the National Science Development Board and the Bureau of Public Works; Department of Agriculture and National Resources, particularly the Bureau of Lands; the Budget Commission, and the University of the Philippines.

CONTRIBUTION OF THE UNIVERSITY TO NATIONAL DEVELOPMENT

Consistent with the provisions of its charter, the Mindanao State University has contributed to the promotion of better understanding between the Muslim and the Christian populations. Years of conflict and misunderstanding, aggravated by isolation and distance, produced an ugly Muslim image in the minds of the Christian Filipinos and *vice versa*. This was the concept that prevailed before the opening of the Mindanao State University. From the constant contacts of the Muslim and the Christian populations — first through the student body and later through their parents and outside visitors to the Mindanao State University — an entirely new image has emerged. The students coming from the different regions of the country — from the northern-most part of the Christian islands to the southernmost end of the Muslim islands — have been together in direct and close contact on the campus as Filipinos. Together they were imbued with the common purpose to acquire learning. Despite their differences in their cultural background, home traditions, and religious practices, they eat together in the cafeteria, live together in the dormitories, play together on the campus, and study in the library and the classrooms. In the atmosphere that accentuated their similarities, physical features, and their different cultures, the boys and girls have come to know each other better and to realize that they are all Filipinos owing allegiance to one and the same flag and the one government.

This initial contact of the Christian and Muslim students developed further with their contact with their respective parents. Much later the parents took upon themselves the task of interesting visitors from the different parts of the country to come to the Mindanao State University and to witness for themselves the happy and friendly get-togetherness of the students. Visitors from the provinces came to the University not only to attend the celebrations and festivities on the campus and in Marawi City but also to find out that except for some differences in the building structures and the dresses of the women, they — Christians and Muslims — are all the same.

Repeated favourable publications about the Mindanao State University have created the impression that peace and order reigns supreme on the campus as no university can function smoothly in a state of disorder and turmoil. The University not only has become a symbol of peace but it has also served as an attraction for the visiting countrymen to see actually the life and culture of the Maranaws. The radio station established on the campus in cooperation with the Philippine Broadcasting Service paved the way for better understanding of national events. It broadcasts news of national significance from Manila which was translated to the dialect known to the people. The purpose of the broadcasts is to inform and acquaint the native population with the national events and to make them feel that they are no longer isolated and neglected but form an integral part of the national movements of the Filipino nation.

On the performance and presentation of native dances and folk songs by the University, the people of the different provinces have realized the great variety of the rich culture of their brothers in the south.

The University likewise served as a tangible and concrete evidence of the interest of the Philippine government in the promotion of the welfare of the Muslim population. With the founding of the University, a common charge before, that the Muslim people were being neglected all these years of the Republic, has been counteracted. The University's educational programme for the Muslims have transcended the programme usually followed in the Christian institutions. The system of scholarships proved to the Muslims the great interest of the Philippine government to educate them. Community high schools afforded schooling in the different communities where before there were none.

Better opportunities for higher education are now accorded. The inauguration of the college-bound project proved the intense interest of the University in the education of the Muslim. The project assisted greatly the Muslim student in his university education.

One of the tangible contributions of the Mindanao State University was the greater interest aroused in education as a means for social and personal progress. Before the establishment of the University, the Muslim population was antagonistic to public education. With its establishment and the employment of educated Muslims, the people saw in university education an instrument for their personal advancement and the great hope for their progress.

After the first four years of operation of the University, the enrolment in the two high schools increased and several other high schools were organized. Each school had overflowing student enrolments on account of the desire of the students to get preparatory training for university education. Before this, students had to go to Manila for university education, and this was inaccessible to the vast majority of the Muslim youth. The Mindanao State University brought higher education to their very door and enabled even the poorest in the community to go to the University.

The University has also contributed to the development of manpower in the different sectors of the economy, service, and professional fields. The graduates of the Mindanao State University now occupy positions in the various establishments and offices in the region. The graduates of the College of Engineering have easily found jobs in the industrial development of Iligan City, while those of the College of Education are comfortably employed in both the public and private schools. The students of preparatory courses in law and medicine have completed their courses, in Manila, while those of the technician courses are serving the needs of the commercial and industrial firms. It is too early to figure out the contribution of the Mindanao State University in the total development of the region. But indications are clear that under normal development, the graduates can provide the leadership so much needed in the economic and social development of the area.

In a small way, the University demonstrated a branch of government service in operation. The government procedures followed in the University demonstrated a project in public administration which was badly needed in the different government offices which had not been exposed to management under the national government requirements. The requirements of the Civil Service Law are observed and adhered to in the different offices in the region. As a matter of fact, the Civil Service Commission maintains an office in the Mindanao State University in order to serve the Muslim communities and to develop a model for the successful operation of a branch of the government service.

At this stage, the University has demonstrated that an institution can be used as an agency for national development. A programme properly conceived and executed to attain pre-determined objectives can help the people achieve their national goals. The founding, organization, and operation of a university require new approaches and insights into the problem of an underdeveloped area. Freed from the pressure of tradition, a young institution can develop its administrative set-up, pattern, and researches, in the way dictated and called for by the needs of the community. It must be prepared to give up some of the traditional mould of the institutions of the West in the search for effective ways to serve the people.

In a flexible and developing nation without tradition and established social order to adhere to, the new university must be given leeway to make choices and alternative programmes which the people of the community need badly. New programmes need not be in accordance with the traditions and requirements of the old established universities in the United States, nor do they need to have all the facilities and requirements which affluent governments and nations can afford, nor do they have the scholars and the leaders that older universities require. A new university, designed specifically for a developing nation, must be willing and ready to overlook some of the traditional requirements to bring into realization the needs of the people. For a developing nation that needs manpower, skills, knowledge, and techniques to accelerate its economic and social development, the first and primary consideration is service to the people. The students may not be prepared to enter the great institutions of higher learning of the West, but if they are provided with the proper attitudes, the needed knowledge, and the appropriate skills to make them serviceable to their family and the nation, that alone could be the supreme goal of a university in a developing nation, for an institution dedicated to the national development must be oriented to the national needs.

Founded to achieve a specific purpose, the Mindanao State University has in the past decade demonstrated that a university can be an effective instrument both for national development and the individual progress of the people of the region. This singular achievement may serve as a lesson for some of the institutions that may be established in the developing areas in the near future.

RAMKHAMHAENG UNIVERSITY: A CASE IN INSTITUTION BUILDING

*Banphot Virasai**

INTRODUCTION

Within a single decade Thailand has witnessed two watersheds in the history of higher education. In 1964 Chiengmai University was established in the province of Chiang Mai, the legendary hub of the former Lanna Thai kingdom. The birth of that institution of higher learning signified the first major step towards the expansion of university education to the regions which are outside of, and far from, the Bangkok-Thonburi metropolis. Quickly on the heels of Chiengmai University (CMU for short) was the opening of Khonkhaen University in the northeast, and Prince of Songkhla University in the south. The demand for higher education in Thailand appears much stronger than most people have anticipated. Take CMU as an example. When the University was first inaugurated in 1964, it had fewer than 400 students. Now, in 1972, some eight years later, the enrolment has already rocketed to an astounding twenty times that figure. At present, that University in northern Thailand boasts of some 7,000 students which is an increase of some 2,000 per cent.

The appetite for higher education is hardly satiated by the 'regionalization' of academic opportunities. The public and the press began clamouring for the opening of another new university with a wider gate of admissions. The demand became a reality with the establishment of Ramkhamhaeng University on 26 February 1971. This very year becomes the second milestone within a single ten-year span in the history of higher education in Thailand.

THE IDEA PRECEDING THE EVENT

That education is highly prized in civilized societies cannot be denied. The world-wide trend at present appears to be ever increasing opportunities for education. Universal elementary schooling is the goal of most countries, regardless of whether it has been fully attained in reality. Thailand has, since the reign of the great Reformer King Chulalongkorn (Rama V, 1869-1910), tried to make literates out of the entire population. In comparison with several Asian and African countries, Thailand is progressing relatively well toward the goal of mass education. Literacy level is now approximately 75 per cent. There are some 5 million pupils between grades 1 and 4 in a country of 35 million. According to a Unesco recommendation, a developing nation (which Thailand is) should have two college students for every 100 pupils currently going to elementary school. If Thailand measured up to this guideline, it should have at least 140,000 students in various universities. But the fact is that as of 1970 Thailand had only 41,000 college students in the entire kingdom. That makes for less than 1 per cent. of the total enrolment of school pupils. No wonder then that prior to the creation of Ramkhamhaeng University, much hue and cry was raised for a great many more seats in existing institutions. Chulalongkorn, Thammasat, Kasetsart and Chiengmai Universities were then obliged to tax their capacity to the utmost by either opening evening classes or creating a novel category of students called 'additional' or 'special'. These students cost the Royal Thai Government some 6,500 baht (US$320) per head. Even so, the demand for college educational opportunities far exceeded the supply under the then existing arrangement.

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Before Ramkhamhaeng University came into being all Thai colleges and universities required regular class attendance. A substantial number of potential undergraduates was turned away simply because of this requirement since they would have to keep a full-time or half-time job while taking courses. Thus the cry for more widespread education of the collegiate level shifted in direction. Instead of higher education in conventional institutions, the demand was for the return to a more democratic form of higher education, namely the 'open university' concept. Thammasat, the second oldest university in Thailand, began in 1933 as the first open or 'free market' university. In 1962 it enforced its newly instituted 'closed door' policy, i.e. by limiting its students enrolment as well as requiring an entrance examination prior to admission. Thus once revived, the idea of an open university is readily understood by those who are interested at all in higher learning.

LAYING THE FOUNDATION

Laying the foundation for Ramkhamhaeng University required much effort, devotion, good sense, and a few favourable factors. With the first semester's enrolment of over 37,000 students it is quite difficult, on hindsight, to imagine how preparations had been made to meet with, relatively successfully, such a large number of students as well as myriad problems contingent upon a newly and abruptly created institution. A chronological account may be appropriate here in order to serve as an overall bird's eye view.

(i) *The Committee on Preparation to Establish a New Open University*

The idea of an open university did not die with the ending of the open admissions policy of Thammasat University in 1962. In 1968 the new Constitution of Thailand was promulgated. A national election ensued soon afterwards. Once Members of Parliament had been elected, a good number of people found a new channel through which to express their desire for the creation of another institution of higher learning which was to be modelled after the system once used by Thammasat University in Bangkok and the much talked-about idea of the 'Open University' in Great Britain.[1]

On 25 October 1970 the Cabinet decided that the demand for an open university should be taken seriously. On 3 November 1970, the Committee on Preparations to establish Ramkhamhaeng University was formally appointed.

(ii) *Committee Members and Other Task Facilitators*

The appointment came so suddenly that a few appoinees were caught by surprise. Nevertheless, the Committee began working in earnest soon thereafter. The assignment was no small task since an institution would have to be created *de novo* within a short time. As a matter of records, the names of members and a brief background of the Committee on the Preparations for the Establishment of Ramkhamhaeng University are given here.

Committee Members

(1) Professor Dr. Sakdi Pasuknirunt, Chairman.
Previous Experience. Professor of Political Science, Thammasat University; Dean of the Faculty of the Social Sciences, Chiengmai University; Secretary-General of Thammasat University. At the time of the appointment, a Technical Officer in the Prime Minister's Office.

(2) Mr. Prapasna Auychai, Committee Member.
Previous Experience. Secretary-General, Institute of Legal Education of the Bar Association; Judge of the Supreme Court.

(3) Professor Paibool Suwanposri, Committee Member.
Previous Experience. Professor in the Faculty of Commerce and Accountancy, Thammasat University.

(4) Assistant Professor Tanakarn Bhatrakarn, Committee Member.
Previous Experience. Lecturer in the Science Faculty of Chulalongkorn University; Lecturer and Registrar of Chiengmai University; Lecturer of Thammasat University.

(5) Dr. Apirom Nanakorn, Committee Member.
Previous Experience. Dean of Instruction and Head, Department of Education, College of Education, Bangsaen; Lecturer, Graduate Studies, Prasanmitr College of Education, Bangkok.

(6) Dr. Udom Warotamasikkhadit, Committee Member.
Previous Experience. Lecturer, College of Education, Assistant Professor, Linguistics Department, University of Pittsburgh; Associate Dean of Humanities and Social Science, Pranakorn College of Education.

(7) Dr. Banphot Virasai, Committee Member and Secretary of the Committee.

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[1] See *The Open University Prospectus, 1971*, E.J. Arnold and Son, 1971.

Previous Experience. Lecturer in Political Science, Acting Chairman, Sociology-Anthropology Department, Committee Member, Educational Planning Committee, Chiengmai University.

The listed names were those who were formally involved in the planning of the new open university established in 1971. Their tasks were, however, facilitated by a good number of persons who helped on an informal or even *incognito* basis. It is appropriate to note down some of their contributions here.

Task Facilitators

Legislators. The impetus that set the idea of an open university rolling, despite the opposition from many educators and other quarters, and finally made it a reality, came from several Members of Parliament. The key member was MP Pramual Kulamas of Chumporn Province. It was he who put in motion a legislation, calling for the founding of a new university — based on an open admissions policy — so that the gate of opportunities in higher education could be opened much wider.

His proposal got a good measure of support from his fellow legislators. The University owed a debt of thanks to those Members of Parliament who helped, at various stages, in the process of planning and building an institution of advanced learning. Among other things, they persistently and successfully steered the Bill of an Open University into an accomplished Act of Ramkhamhaeng University (which was later signed and promulgated by His Majesty the King on 26 February 1971). Also, they saw to it that a necessary budget was set aside in anticipation of the opening of the University. Further, they helped affirm the image of the University as being the institution which originally sprang from the needs of the population at large. As a matter of fact, it may be proper to note that the successful founding of Ramkhamhaeng University fulfilled the spirit of the celebrated Latin saying: *'Vox populi vox dei.'*

Government officials. An organization, much less a more complex academic institution, cannot be created just by a legislative *fiat.* Support, cooperation, and coordination are a necessity, particularly from those in the various echelons of the civil service bureaucracy. One of those who made valuable contributions was the Minister of the Prime Minister's Office — a military man by training, but an educator by personal liking. Others were several heads of government agencies, such as the chief of the Government Printing Bureau, who agreed to print textbooks in large quantities for the yet-to-be-born University. Many others came from the lower echelons of the Civil Service whose services ranged from typing to running errands. That the above support came so readily seemed to be due to the personal ability and perseverance of the

Chairman of the Committee on Preparations, together with his wide-ranging experiences in governmental services.

Prospective staff of the new university. Even before the bill proposing the erection of the new University was debated on the floor of the House of Representatives, many people had already inquired for positions, and volunteered to work immediately for the new educational institution pending their formal transfer or appointment. One notable example was the case of an official of the Ministry of Education, whose expertise was in the field of Library Science. She helped prepare details for the opening of the Central Library for the University. The details were tedious, including kinds of bookshelves, lists of books to be purchased and catalogued, librarians to be recruited and trained, and so on.

To Begin at the Very Beginning

In one of his most renowned speeches, President John F. Kennedy quoted the wise saying of an ancient Chinese sage that 'a journey of a thousand miles begins with a single step'. Building an institution from scratch may be thus likened. To be sure, the first step may appear small, insignificant, and laborious, but once it is taken, the journey is on. There is yet no guarantee of success — or light at the end of the tunnel. But to keep on trying would, definitely, not do any harm.

As far as the founding of Ramkhamhaeng is concerned, the act of appointment of the Committee on Preparations was the green signal that flashed the approval for the task to begin. Immediately thereafter, the Chairman took members of the Committee to a short session with the Prime Minister, Field Marshall Thanom Kittikhachorn. The session was a courtesy call to fit an unwritten protocol as well as to hear the Prime Minister's counsel on the planning of a new venture. Right on the heels of this ceremonial action, the Chairman called the first meeting among members. It took place on 10 November 1970 in the Government House. The session was business-like. It indeed set the tone of later meetings. Assiduous work, serious-mindedness, and minimum time allowed for delays helped speed the first step towards the goal: the successful creation of the University in nine months. It was mainly the planning and decisions made at these regular meetings that were largely responsible for the structural framework of Ramkhamhaeng. Specific matters are outlined separately below.

GENERAL RULES AND REGULATIONS

It has generally been accepted that an institution of higher learning is called upon to perform three functions, namely, teaching, research, and public service. Teaching does come first, but it presupposes the existence of a curriculum and an overall instructional framework. This task was assigned to one of the Committee members whose ability and scientific rationality have already been recognized elsewhere. The burden that fell on him was the production of a rough draft on the organizational set-up of the University. The draft was then presented to the Committee on Preparations at its twice-weekly meeting for consideration. There were additions, deletions and revisions, sometimes extensively, while at other times minimally. Some of the topics covered and decisions taken, are outlined below.

Admissions

All those with an education of MS 5 (grade 12) or equivalent, as approved by the Ministry of Education, would be eligible. There was to be no entrance examination whatsoever. This was in conformity with the 'free market of ideas' philosophy as followed in England under the name of the 'Open University', and in the United States, in such institutions as CUNY — City University of New York.

Registration

The process is normally long and boring. But it would have to be carried out in the most efficient and time-saving manner in view of the expected large enrolment and the acute shortage of personnel in the early days of institutional development. The eventual enrolment was beyond our own estimate, the student populatior which registered in the very first semester shot up to over 37,000. The number is quite huge in comparison with other colleges and universities in Thailand. Chulalongkorn and Thammasat, hitherto the two biggest institutions in Thailand, had then a combined enrolment of some 21,000 students.

Rules Governing Students

Those who were expected to apply to become students of the University varied greatly in terms of age, occupation, and educational background. As it turned out, at least three of our students already have a Ph.D., a good number have either a B.A. or an M.A. Occupation-wise, our students range from the rank of a major-general to a lance corporal, from the special grade position of deputy secretary-general to the minor civil service grade of a clerk, from the academic hierarchy of dean of another university to a low-ranking teacher of an elementary school. When the University first opened its doors in 1971, our students, all freshmen, varied in age from 17 years to 71 years. Accordingly, the rules concerning student behaviour had to be formulated in such a way as to apply fairly to all. To cite just a few, unlike other colleges in Thailand, students are not required to wear a fixed uniform to attend class. Moreover, there is no roll-call for attendance. At the very minimum, students may choose to come to the University only two or three times a semester, namely, to obtain a general orientation, to register for courses after consultation with their designated academic advisers, and to sit for final examinations. With regard to student conduct, they are required to behave in conformity with general rules of propriety.

CURRICULUM DEVELOPMENT

As originally conceived and officially stipulated, the University is to make itself readily accessible to very diverse categories of students. At least 50 per cent. of students were expected not to be able to attend classes on a regular basis principally due to their engagement in a full-time job and the distance from the University. The curriculum that the Committee on Preparations was developing had thus to keep the University's distinctive characteristics clearly in mind. The Committee was, however, firm in its stand that academic standards would be rigorously maintained. The curriculum which was finally adopted was patterned after a liberal educational programme as universally followed in the United States, and as required in some newer institutions in Thailand, e.g. at Chiengmai University. Briefly stated, the curriculum consists of two years of broad education during which time the student is exposed to a wide variety of subjects, while in the junior and senior years the student is to concentrate on his major area of interest from which his degree would be designated, such as B.A. (History), B.A. (Econ.). The major exception, after much discussion, is the curriculum for a law degree. It has the fewest liberal educational courses in view of the fact that in Thailand graduates embark on a legal career right after the baccalaureate. In addition, the profession is governed by regulations laid down by the conservative Bar. At the moment of creation the Committee could have moulded the study programme to suit its educational philosophy. But, being mindful of the problem of future employment of the law graduates, the Committee agreed to compromise on the curriculum for law students.

ACQUISITION AND PROVISION OF EDUCATION MATERIALS

To provide collegiate education for some thirty thousand students with only a very short period of planning and detailed preparations is indeed a gigantic challenge. The Committee on Preparations had, however, no time to waste on complaining or seeking the postponement of an opening date for a much longer preparatory time. The Chairman of the Committee was particularly committed to the successful beginning of the new University within the academic year of 1971. Having to serve so many people in so many different parts of the country, the University would have to make available a relatively complete set of educational materials by the time the first session began. A crash programme of textbook production had thus to be inaugurated. Thanks to the unflagging efforts of the University's prospective lecturers and the skilful management of one of the Committee members, most textbooks were ready for students' use on 2 August 1971, the first day of instruction, or soon thereafter.

Apart from servicing students so that they may study on their own at home, the Committee estimated that in certain classes there might be more than 2,000 students who would be regularly present in the lecture hall. Audio-visual aids would thus be indispensable. It was decided then that closed-circuit television would have to be installed in order to monitor lectures for the audience in two or three halls. This decision has proved extremely beneficial. The instalment of the system with some seventy television sets has indeed enhanced the quality of instruction for a huge mass of audience. The students can hear and see the teacher in full voice and view. The instructor is obliged to prepare his lectures well since he would be on the spot all the time while he is at the lectern.

PERSONNEL RECRUITMENT

The organization which was designed to handle a clientele of over 30,000 persons needs a large personnel. The personnel for Ramkhamhaeng University may be divided into four categories. The first one is the group of top administrators. While the Committee on Preparations was laying the foundation for the University, it was uncertain as to who would be chosen by the Thai Government to run the institution. A few months prior to the opening date there was an official announcement to the effect that all, but one, top administrative personnel, i.e. Rector, Deans of the four faculties, and the Registrar, were drawn from the Committee members. This was a boon to the institution-building process since it allowed continuity of planning and for smooth implementation of set programmes.

The second category of personnel consists of administrators with somewhat lesser responsibility, e.g. Chief of the Central Secretariat, Head of the Printing Bureau, Chief Librarian, Head of Requisition, etc. There was no difficulty in finding qualified persons for such positions. As a matter of fact, virtually all holders of these positions had come and helped with the preparations for the opening of the university. All of them had earlier worked elsewhere but chose to be transferred to Ramkhamhaeng University.

The third category comprises the personnel in the lower echelon who perform more or less routine jobs, such as staff of the Requisition Section, clerks, stenographers, messengers and janitors. A good majority of these positions were filled through examination. The rest were recruited through the process of transfers from other governmental units.

The fourth and final category is the corps of instructors. To find adequately-qualified ones was not easy. Thailand is, in general, short of educated persons with at least an M.A. degree from a reputable university either at home or abroad. Nevertheless, the problem of recruitment as faced by Ramkhamhaeng University during the early days of its creation was not very acute. For one thing, the University is situated in Bangkok; in case of real need 'special' lecturers from other educational institutions could easily be invited to take over a class. For another thing, regional brain drain is ever present in Thailand. That is, most educated persons have a predilection to work in Bangkok (or the Bangkok-Thonburi metropolis) rather than in various regions of the country. Thus, new graduates prefer to join Ramkhamhaeng University rather than apply for jobs in the provinces. Many of those who were working in Chiengmai, Khonkhaen or elsewhere sought to get a transfer to the new University. The Committee on Preparations tried to recruit and accept only those with good academic qualifications. The first choices were Ph.D.'s and those with an acceptable masters degree. The second choices were honours graduates who had to pass an English test and an interview.

During its inchoate stage of development the University was to have four faculties, namely, Law, Business Administration, Humanities, and Education. In addition, there was set up the Registration and Records Office whose status is decreed to be equivalent to an academic faculty. The Law Faculty was to have two departments *viz.*, Law and Political Science. Recruitment of lecturers in law presented the most serious problem. Those with good qualifications preferred to work with the Justice Ministry, principally because of the much higher salary scale. Fortunately, there were several persons who decided to join the teaching staff. In addition, the Committee decided to hire retired Justice Ministry Officials who were well-versed in the knowledge and applications of law to serve as special staff members on a non-permanent basis. (After the retirement age of 60, a person may not legally be employed as a regular official.) In addition, well-qualified judges or private persons were invited to impart their knowledge on an hourly basis. As far as the Political Science Department was concerned, it was fairly easy to obtain staff members with appropriate degrees.

Within the Faculty of Humanities there are several departments and programmes, including English, Thai, French, History, Library Science, Sociology-

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Anthropology, and Philosophy. The problem of recruitment was not acute except for the fact that an unusually large number of English instructors were required almost immediately since all freshmen would be taking English from the very first semester. The Faculty of Education was assigned to give instructions in science and mathematics subjects in addition to its conventional teachers' training courses. There appeared to be no paucity of applicants with M.Ed. degrees. The difficulty lay, however, in the acquisition of faculty members with degrees in Science or Mathematics proper. An active recruitment effort continues to the present since there was a plan afoot to open a Faculty of Science within a short time.

The Faculty of Business Administration has three principal departments, namely, Business Administration, Accounting, and Economics. Due to much higher pay in private enterprises not many instructors in Accounting were available for selection in contrast to those in either Business Administration or Economics.

THE UNIVERSITY'S LOCALE AND BUILDINGS

The establishment of Ramkhamhaeng University appeared to take the least time in comparison with the creation of any other institutions of higher learning anywhere in the country and, perhaps, anywhere in the world. It took three to four years of preparations before Chiengmai University could admit its first students. It took about three years before Khonkhaen University was inaugurated. And at least more than three years of work had gone in laying the foundation of the Open University in England which finally opened in 1970. One principal reason accounting for the fast erection of Ramkhamhaeng University was the fact that many buildings were already available. The site where the University was allowed to locate itself had been unused for some five to six years. The present campus, spreading over about seventy-five acres of land in Hua Mark, an outlying district of Bangkok, was originally designed to serve the International Trades Exhibition. The buildings were those built by various countries participating in the Exhibition.

A few were in a very dilapidated condition and had to be torn down. But most, numbering about ten, required only moderate repairs. Still, these were not sufficient to handle the huge student population. The Parliament had previously set aside a modest 5 million baht for buildings and teaching aids. Part of the money was spent on the repair of existing buildings as well as on the purchase of such items as chairs, desks, office supplies, and other educational materials. Much of the rest was spent on the construction of new buildings for classrooms, offices, and library. Due to the fact that the Government was then, as it still is, undecided about the permanent location of the campus, the Committee on Preparations was obliged to comply with the Budget Bureau's regulations which stipulate that the buildings erected would have to be of a 'semi-permanent' type. That means the structures could not be constructed with more than two floors. Needless to say, the requirement has wastefully pre-empted a lot of space for future campus growth.

COPING WITH LARGE NUMBERS

When the Committee on Preparations started planning for the operation of the University, it was estimated that at the maximum there would be 15,000 applicants. But as time went on the estimate proved wrong. It had to be revised two or three times. The total number of students for the first semester ever was some 37,000. The first orientation of new students took place on 15 May 1971 in the largest sports stadium in Thailand. People representing some 1.2 per cent. of Bangkok residents headed for the gigantic gathering. The first orientation was carried out successfully as was the second one, held on 31 July 1971 on the University's compound, for those students who applied later.

The two orientations gave us a foretaste of things to come. The success in planning and implementation did not come without, quoting Sir Winston Churchill's celebrated phrase, 'blood, sweat, and tears', albeit not literally. Few complained of the hardships involved. Prior to the orientations practically all the University personnel had to work Saturdays to cope with the constant flow of students who came to have their applications processed and to complete their registration for a programme of study. One could hardly forget those hectic days with so many long lines of prospective students queuing up. Their papers had to be carefully examined as to their qualifications and necessary credentials. The task taxed one's endurance to the utmost, due significantly to the very nature of an open university. Virtually all who came to apply felt that it was their unquestionable right to be admitted. Many among them were thus more impatient than was otherwise justified when the admission and registration processes happened to get bogged down for some reason. Nevertheless, the University personnel found the assignment challenging and did not let it get them down.

EVALUATING THE RESULTS OF THE FIRST SEMESTER

To give a final examination to over 30,000 students was indeed a burdensome task. First, examination questions had to be formulated in an easily gradable form. This required objective-test types of questions, e.g. multiple-choice, matching, true-or-false. Second, the questions had to be printed well ahead of the examination time due to the sheer number of students. On the average one student took six courses a semester. Each course covered some ten pages of objective tests, including a separate answer sheet. For 37,000 students who were expected to sit for the examination, the University needed to use some 1,000,000 sheets of paper. Third, the printing and other processes prior to the actual administering of each examination had to be closely supervised, and heavily shouldered—at times in the very literal sense—by the lecturers themselves. The task placed on the teaching staff was particularly laborious, yet necessary in order to ensure the secrecy and orderliness of the examination process. Fourth, during the first semester the University buildings were too few to accommodate properly the examinees. It was accordingly contingent upon the University to borrow classrooms of more than a score of schools in Bangkok. The staff of the young University was also too small to proctor the examinations. School teachers elsewhere were thus hired to help in this matter. The University's staff members had, however, to spread themselves thin in order to be in charge of proctoring in schools as far as one hour's drive from the campus. Fifth, once the examination was over, the University immediately embarked upon the grading of some 190,000 answer sheets. Most of the grading was done by machine, but many human errors impeded the work. The errors stemmed chiefly from the newness of the test instruments. A good number of students failed to make proper markings on the answer sheet. Many others mutilated it, causing it to be rejected by the machine. Hand grading had thus to be done in thousands of cases, requiring a great deal of man-hours of labour. In addition, a number of instructors had to be mobilized to do the grading of subjective (essay-type) questions. Sixth, and last, examination results had to be ready within a short time for students' perusal or for sending out to those who had supplied self-addressed envelopes. The entire examination process took approximately two months for a single semester.

RAMKHAMHAENG: A CASE IN INSTITUTION-BUILDING

To build an institution is no easy task. It requires several material factors together with patience, stamina, serious-mindedness and high hope. Indeed, one can hardly say that an institution is built though physical structures are evidently constructed. An institution like Ramkhamhaeng is pregnant with meanings—much more than those which meet the eyes. *Prima facie,* the University is represented by the landscape and the buildings of variegated architectural styles at Hua Mark—a reminder of the well-publicized International Trades Exhibition. Seen more closely, it is the huge number of its enrolment and the quality of its academic and administrative staff. There is yet still another aspect which is unseen but ever present. That is the idea or ideal which has inspired the creation of the University. The ideal springs, first, from the dream that higher learning should be made readily accessible to all those who hanker after it. The second component of the ideal consists of the firm faith in 'nurture' as against nature. In an open university like Ramkhamhaeng there is necessarily a strong belief that, given a proper intellectual climate and an academic environment, a person however poor in educational background may be able to master a subject, provided that he be serious in his determination and unflinchingly carry on the burden of independent study with minimum classroom guidance. The ideal helps explain the incredibly high enrolment figures, and the relative ease in the recruitment of the University personnel. The relative suddenness of the establishment of the University seems to have, however, been partly responsible for the modest budget allotted for its operation. Ramkhamhaeng has received the smallest volume of funds, despite its large enrolment. Its budget is some 23–25 million baht (about US$1 million) for over 30,000 students, i.e. approximately 760 baht (about US$35) per head, while a university elsewhere, e.g. at Chiengmai, receives an operating fund of some 100 million baht for an enrolment of 6,500, or 15,000 baht per student. The discrepancy is even more glaring if it is taken into account the fact that Ramkhamhaeng is in the incipient stage of institution-building, accordingly needing a large sum for construction.

An institution in its full-blown form cannot be built overnight or over a short period of time. The narrative account on the rise and development of Ramkhamhaeng is to serve as an illustrative case of an institution which has been quickly wrought under the pressure of time. Its creation has indeed been a success. The University's framework, as fashioned, contains certain elements of dynamism which definitely allows and encourages future growth. To rephrase the Chinese sage's saying, the first step has already been taken, and the march is now on towards the goal of academic excellence.

THE DEVELOPMENT STAGES OF THE BANDUNG INSTITUTE OF TECHNOLOGY*

*D.A. Tisna Amidjaja***

INTRODUCTION

An increasing awareness in developing countries of the need for the realization of a sound application of science and technology in obtaining a more rapid and balanced growth can be observed during the last decade. This awareness has its roots in the belief that a better future could only be secured through a sound application of science and technology in development. This implies a need to change the basic patterns of society. This change should lead towards a structure which would enhance economic development and the national well-being of the people.

The formulation of an overall science and technology strategy is one of the essential basic policies in development. Such a policy should have broad aspects and should touch on a wide scope, ranging from education and research to industry, trade and defence. The implementation of this policy would need massive national efforts and sound administrative coordination. Furthermore, a full commitment of the political leadership would be required, which is not always easy to obtain.

Being aware of the need is one thing; to translate this awareness into a well-coordinated effort on a massive national scale is another. The root of the difficulties is inherent in the basic structure of developing countries. Among the constraining factors in most developing countries towards a fruitful utilization of science and technology are:

(i) The existence of a traditionally-oriented structure,
(ii) An absence of an industrial base, and
(iii) An educational system rooted in the past.

Furthermore, some developing countries have obtained their independence through a revolution and in these countries political awareness runs high, political upheavals are more common, and a disintegration of the state administrative machinery often takes place. Moreover, this is usually accompanied by an economic breakdown of the existing structure. Development problems are then magnified, and a breakthrough becomes more difficult.

It is obvious then that the science and technology institutions in developing countries should become the instrument for the realization of the application of science and technology in development. In this respect, the basic question faced by these institutions is how to utilize the science and technology potentials in order to foster economic growth.

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This basic question needs to be examined with a pragmatic outlook that would better serve the present needs. Problems generally arise from the use of imposed technologies from outside. Very often this also results in creating domestic pressure groups motivated by short-term gains. The question of the application of technology then becomes not completely free from politics. Institutions of science and technology in developing countries should be aware of this, and should safeguard national interests by developing science and technology in terms of long-term national interests.

It is a fact of life that in most developing countries the most advanced imported technology exists side by side with traditional indigenous technologies, and this will continue for many more decades. This is inevitable since in the present world one cannot completely stand on one's own feet but will have to import new technology from abroad. In the developing countries, the policy on technology should not be defensive in the sense of preventing new technology from entering in, but should be offensive in nature by realizing the existence of a 'war on technology'. The policy should aim at vitalizing the nation's capabilities in technology and to make it viable in order to promote economic development.

It is with these convictions in mind that we, at the Bandung Institute of Technology (ITB), set out on our task of planning the future of our institution.

The ITB is a continuation of the Dutch Technical College established in 1920. It has passed through various stages and, with the acceptance of the ITB Development Plan by the Government in 1972, is now on its way to becoming the University of Technology. As the University of Technology, graduate and undergraduate programmes of studies will be fully integrated, where sciences, technology, humanities and arts will become interrelated parts of a whole system of education.

As an institution of science and technology, ITB's role and functions will extend beyond those of conventional educational institutions found in developed countries. In order to be relevant to the needs of Indonesia, ITB will be a university that is development-oriented and development-committed. This fundamental philosophy will direct all ITB's programmes and activities.

To appreciate the implications of this policy, it might be illuminating to pose the basic development problems faced by Indonesia. In short, these problems may be summarized as follows:

(i) The need to expand employment opportunities,
(ii) The equalization of income distribution and social justice,
(iii) The promotion of balanced growth among the regions,
(iv) The need to achieve stability, economic as well as political,
(v) The need to increase the availability of funds, local as well as foreign, and
(vi) The need to improve the state administrative machinery.

A breakthrough will certainly be needed and innovation is the key to this. This is the challenge faced by the nation and ITB, as one of the leading institutions of science and technology in Indonesia, should have a share in providing the needed innovation for this breakthrough.

THE STAGES OF DEVELOPMENT OF BANDUNG INSTITUTE OF TECHNOLOGY

Looking back at the different stages of development of the Bandung Institute of Technology—from its beginning in 1920 as the Dutch Colonial Technische Hogeschool, run by the Netherlands East Indian Government; through the Japanese occupation period in the form of the 'Kogyo Daigaku', and to the period of Indonesian independence, until today, with its present form as the Institut Teknologi Bandung—we can recognize the different programmes and organizations of the Institute which reflect the needs of the society at different times. It shows clearly that the different national political environments over time have exerted a significant influence on this institution of higher learning because of its importance to the government and society.

The Bandoengsche Technische Hogeschool

The Bandoengsche Technische Hogeschool (BTH) was established in 1920 through the initiative of a private business group belonging to the Netherlands Indies Colonial Community with the prime objective of producing educated manpower to cater to the needs of their Industries and estates. The needs were particularly felt when communications between the Netherlands Indies and the motherland, the Netherlands, were disrupted during World War I.

When this private venture turned out to be a success and its first graduates could perform equally as well as those from the Technische Hogeschool at Delft (in the Netherlands), the Bandoengsche Technische Hogeschool was then taken over by the Dutch Colonial Government in 1924.

Until the outbreak of World War II, the basic objective of BTH was to support the administration and industrial activities of the Dutch colonial regime. This was reflected in the composition of the curricula and the types of departments established during that period. For example, the Chemical Engineering Department was set up in 1940 and the Civil Engineering and the Mechanical Engineering Departments were set up in 1941. In addition, the following laboratories were also set up: the Water Irrigation Laboratory in cooperation with the Department of Public Works (1927), the Electrical Engineering Centre Laboratory (1929), the Civil Engineering Laboratory (1930), the Soil Engineering Laboratory (1934), and the Sanitary Engineering Laboratory (1935).

Just before the Second World War started there were 213 graduates in civil engineering, of which only a few dozens were Indonesians.

The Bandung Kogyo Daigaku

During the Japanese occupation, from 1942 to 1945, the BTH was reopened under the name of Institute of Tropical Services. The main objective of keeping the school open was to enable the Japanese military to carry out research work, for example, the study of *jarak* (plant oil), and to produce certain types of instruments.

In 1944 the Japanese Military Government transformed the Institute into the Bandung Kogyo Daigaku, with two levels of education: (i) the upper level, *daigaku*, which is equivalent to the diploma or degree level of technical engineering, and (ii) the lower level, *senmonbu*, which is equivalent to the intermediate level of technical engineering. There were three fields of engineering: (i) civil engineering (*dobukuba*), (ii) chemical engineering (*ojakagakuka*), and (iii) electrical and mechanical engineering (*denki/kikaika*).

The language of instruction by the Japanese professors was mainly Japanese, with limited use of English. Courses given by the few Indonesian professors were in Indonesian. The number of students allotted to each department was restricted to thirty only and these students had to stay in dormitories, so that for the first time a kind of guided study system was introduced at the Institute. During the Japanese occupation, five graduates, all of them in civil engineering, were produced.

The Sekolah Teknik Tinggi

Soon after the proclamation of Independence of the Republic of Indonesia in 1945, the school was reopened, bearing the name of Sekolah Teknik Tinggi (STT). However, due to the so-called first military action and the invasion of Indonesia by Dutch troops in 1946, followed by the occupation of certain parts of the country, i.e. West Java with the city of Bandung as the stronghold of the Dutch forces, the newly-reopened STT was compelled to evacuate to Jogjakarta, while students at advanced stages of study, e.g. in the fourth or fifth year, were sent to India to continue their studies.

The 'STT-Bandung in exile' in Jogjakarta had a very short history. The second military action of the Dutch in 1948, with troops invading those parts of the country still under control of the Republic, and the consequent outbreak of fierce guerilla warfare around Jogjakarta compelled the school to be closed down again.

After the recognition of sovereignty of the Republic of Indonesia in 1949 by the Dutch, the STT was reopened again with only one department, i.e. the Civil Engineering Department. When the University of Gadjah Mada was established in Jogjakarta in 1949, the 'STT-Bandung in exile' was incorporated into it as the Technical Faculty.

In the meantime, while fighting was still going on in the country, the Dutch Provisional Government opened the Nood Universiteit van Indonesie (Emergency University of Indonesia) in 1946, with faculties in Jakarta (the Faculties of Medicine and Law), in Makassar (the Faculty of Economics), and in Bandung (the Technical Faculty and the Science Faculty) in the old compounds of the STT.

The Technical Faculty comprised the Civil, Mechanical, and Chemical Engineering Departments. The programmes of studies and their duration were based on the Delft's system in Holland, while lectures were given in Dutch. Later on, the Nood Universiteit van Indonesie was given the name of 'Universiteit van Indonesie'.

The Faculties of Engineering and Science in Bandung

After the transfer of sovereignty in 1949, when Indonesia had gone through much suffering and destruction, the national leadership faced a tremendous task of building up the country, with shortage of trained personnel in all sectors and levels of administration. The need was especially great for academically trained people, especially in the engineering field. It was obvious then that manpower development was of prime importance. This was met in the first place by imposing this responsibility upon the newly-opened universities, i.e. Indonesia and Gadjah Mada. A second way out was to send students abroad to do postgraduate studies. In the years 1949 to 1956, hundreds of students were sent abroad mainly to Europe, i.e. Holland, Germany, England, Switzerland and France.

This period, from 1949 to 1956, was a historic period, especially in the Faculties of Science and Engineering in Bandung as forerunners of the ITB. Because of the shortage of Indonesian academic personnel, the teaching and key administrative functions were performed by Dutch professors.

Obviously the education was a complete replica of the Dutch system, with instruction also given in the Dutch language. It was easily conceivable, with the political environment still uncertain after the armed confrontation and the question about the status of West New Guinea (Irian) looming ahead, that the Dutch administrators of the Faculties in Bandung were not in a position to make any long-term educational programmes.

This and the abrupt exodus of the Dutch in 1956 in consequence of the quest for Irian showed their backlash later on in the course of development of the Institute. It is important to note that in the years approaching 1956, the Indonesian Government more and more sought the services of non-Dutch European professors on short-term contracts, especially from German-speaking countries, i.e. West Germany, Austria and Switzerland. And consequently the faculties in Bandung became multi-lingual educational institutions, where the languages of instruction were Dutch and English, while Indonesian was gradually being introduced into the laboratory courses by young Indonesian assistants.

As mentioned before, these foreign professors, i.e. the Dutch, because of the uncertain political climate, and the other Europeans, because of their being on short-term contracts, did not have a clear development programme for the Institute. This was also due to the fact that the few Indonesian senior staff members were not in a position to give impetus in this direction within the largely foreign-dominated senate and faculties while most of the Indonesian cadres, being still too young and low in academic rank, were not qualified yet to have a say in policy matters.

All these brought about the fact that certain sectors of development in the Institute, e.g. the training of teaching and non-teaching staff, were not given a clear direction.

Students sent abroad to study were not given proper guidance as to what they should study that would be most relevant to their future tasks at the Institute. This often led to fields of studies, like nuclear engineering, aeronautic engineering, shipbuilding, etc., which were not applicable yet in the Institute's educational programme at the time they came back.

Also, in the procurement of equipment needed for education, there were signs of neglect or ignorance. For example, many sophisticated instruments were ordered that suited the narrow speciality of a certain professor rather than for teaching the basic courses. By the time the equipment arrived, the professor on short-term contract would have already left, leaving no successor who could make use of the equipment.

In 1956, the Engineering Faculty comprised the following departments, i.e. Civil Engineering, Chemical Engineering, Electrical Engineering, Mechanical Engineering, Engineering Physics, Geodesy, Arts and Architecture, while the Science Faculty comprised the Departments of Mathematics, Astronomy, Physics, Chemistry, Geology, Biology and Pharmacy.

An important achievement in the 'Indonesianization-process' was the appointment of an Indonesian professor as Dean of the Engineering Faculty in 1953.

The Kentucky-Contract Team Programme, 1956-66

In 1956, the two Faculties of the Universitas Indonesia in Bandung were chosen as a USAID project, administered by the Kentucky-Contract Team Programme (KCT-programme). This programme, which lasted two terms of five years each, was aimed at strengthening and stabilizing the undergraduate study. In other words, manpower development, curriculum development and development of facilities were the prime objectives.

In the manpower development programme, a counterpart-system was adopted, i.e. an American professor would work closely together with an Indonesian counterpart in developing the programme of the department concerned. Each year, twelve to twenty American professors were attached to the Institute on two-year assignments. However, for every American professor an Indonesian counterpart was not available. During the ten years of the Kentucky-Contract Team programme (1956-66), 250 young Indonesian staff were sent to the United States for further studies or to attend special upgrading programmes. Of these, thirty succeeded in obtaining Ph.D. degrees and forty M.Sc. degrees. In fact, most of the KCT scholarship holders were potential Ph.D. candidates. However, as they were badly needed in Indonesia, the duration of their studies in the States was limited to a maximum of two and a half to three years. This manpower development programme could be considered a success.

In the curriculum development programme, one important aspect was the introduction of a credit system and a kind of guided study into a study system for undergraduates which was then following the Dutch pattern.

The Founding of the Institut Teknologi Bandung, 1959

The two Faculties of the Universitas Indonesia in Bandung had developed very rapidly in the ten years prior to 1959. The student number had increased by approximately six times and the faculty number by about ten times. All these and the fact that young faculty members were joining the institution, many of them had returned from abroad with innovative ideas, generated the idea of separating the two Faculties in Bandung from the cumbersome central administration at the Universitas Indonesia in Jakarta. The idea was to amalgamate the two Faculties into an independent organization which was thought to have more relevance to the needs of the country. At that time the prevailing problem was the exodus of the Dutch which left behind industries, public works and administrative machineries without qualified technical personnel.

In March 1959, the Institut Teknologi Bandung was officially established by the President of the Republic of Indonesia himself, as an institution of higher learning with full university status.

The ITB then had three basic functions: education, research and industrial research and affiliations. To administer the third function, the Institute for Industrial and Research Affiliation (Lembaga Affiliasi Penelitian dan Industri or LAPI) was set up. Later on, this Institute became the 'business arm' of ITB and established the link with the business community.

The seventeen departments of ITB were grouped into three units, based on their close functional relations. These were:

(i) *Engineering.* Departments of: Mining Engineering
Geology
Civil Engineering
Geodesy
Planology & Town Planning
Architecture & Arts
Electrical Engineering
Mechanical Engineering

(ii) *Mathematics & Physics.* Departments of: Mathematics
Physics
Engineering Physics
Meteorolgy & Geophysics
Astronomy

(iii) *Chemistry & Biology.* Departments of: Biology
Chemistry
Chemical Engineering
Pharmacy

As evident from the types of department established, there are in fact three main streams of study at ITB, i.e. Science, Engineering, and Fine Arts. Students are encouraged to take courses across the different streams of study.

In 1966, the Bureau for General Studies was set up to administer the non-departmental courses in Humanities and Social Sciences.

Since 1959 ITB has grown rapidly, not only in the size of the faculty and the students, but also in the number of departments and the output of graduates. Since 1959, four new departments have been added, i.e. Sanitary Engineering, Petroleum Engineering, Industrial Engineering and Fine Arts. (Table I gives an overall view of this development.)

TABLE 1

GROWTH OF ITB, 1949-72

Academic Year	Number of Students		Number of Depts.	Number of Staff-members		Number of Graduates	
	Science	Engineering		Indonesian	Foreign	Science	Engineering
1949	239	532	16	—			1
1950	360	929	16	11	45 Dutch and 3 other European professors from 1950-6		3
1951	434	1459	16	14			6
1952	462	1841	16	15			8
1953	591	1844	16	21		8	5
1954	730	2281	16	25		10	11
1955	980	2352	16	31	60 American Kentucky-Contract Team professors from 1956-66	21	23
1956	1161	2832	16	41		38	37
1957	1313	2892	16	58		39	82
1958	1048	2911	16	80		164	148
1959	1227	3265	17	106		55	139
1960	1462	2607	18	133		87	226
1961	1139	2804	18	167		47	246
1962	1254	3019	19	197		80	367
1963	1233	3210	20	245		113	352
1964	1217	3214	20	268		142	408
1965	1040	3196	20	293		132	256
1966			20	302		65	82
1967	1221	3825	20	323		142	149
1968	1098	3583	20	347		114	154
1969	950	3695	20	351		60	221
1970	1062	4286	20	373		30	74
1971	996	4325	21	383		90	270
1972	1018	4595	21	400		64	144

Introspective Years, 1965-7, and the ITB Development Plan for 1971-81

During the turbulent years of 1965-7 in Indonesia, when the whole country was forced to go through a most difficult crisis in which the former regime with its 'lighthouse policy' was crumbling down, ITB went into a period of serious introspection. This attitude or spirit to find new avenues for development culminated in two events: first, an internal Symposium on Repositioning the ITB in the National Framework of Development held in 1967; and second, a National Seminar on Technological Education, organized on the occasion of the fiftieth anniversary of technological education in Indonesia, in 1970.

Direct and concrete implications of this introspection were further manifested in the organization of a committee in charge of drafting and designing a comprehensive development plan for ITB for the coming decade. After a careful assessment of the prevailing position of ITB and guided by the national interests within the framework of the national development strategy, the committee arrived at a basic strategy for the development of ITB. As a policy, it was decided that the success in the development of ITB could most likely be achieved if for the first ten years, i.e. 1971-81, we do not plan for growth but concentrate our efforts in achieving high standards and stability. For example, this means that the student number would not be increased substantially during this period.

Taking into account all the factors mentioned above, we have set out our planned objectives for the next ten years as follows:

(i) To achieve high and relevant standards in education.
(ii) To intensify and to achieve high standards in research.
(iii) To develop and to disseminate adaptive technology.
(iv) To lay down a strong foundation in order to be able to pave the way to adapting advanced technology.
(v) To improve the standards of higher education by cooperation with other universities.
(vi) To increase the effectiveness of the use of science and technology potentials by cooperation with the various institutions of science, technology, and industry, and
(vii) To provide assistance to the Government in its efforts to improve general education.

It will be obvious that in planning one has to have some ideas about the factors which will affect the attainment of the planned objectives. Some of the factors are within our control, some are beyond our control, while others are such that the Institute's ability to exert its efforts are limited. The time factor is usually associated with the last group.

One of the factors in which the Institute has very little control is the quality of the new students entering each year. The only thing that can be done in this respect is to raise the standards of admission and use the entrance examinations as a basis for selection. Experience shows that this is far from perfect.

Furthermore, the fields of study chosen by students are mostly geared towards their expectations upon graduation. Certain fields which look lucrative attract the best students, while the basic sciences (mathematics and phusics), which need the best talents, very seldom attract the best students. These fields are in general taken as a second choice by students.

The factors within our control and in which conscious efforts can be directed towards the realization of our objectives are:

(i) Teaching staff and supporting or non-teaching personnel,
(ii) Equipment, building and environment,
(iii) Curricula,
(iv) Library materials, and
(v) Administration.

Since each of the objectives will need the support of one or more factors in different degrees and requirements, a matrix could be designed giving the interrelationships between the objectives and the factors. This matrix will then become the basic reference for the evolution of the plan.

This matrix method, which after some conventional modifications can be used as an input-output model, has proved to be a useful tool in planning. It is through this matrix that integrated efforts towards the coordinated employment of the factors could be intelligently utilized.

It has been envisaged from the beginning, and substantiated after analyzing the planning matrix, that the requirements needed to support the objectives are going to be confronted by various difficulties. The difficulties can be categorized in three broad types, i.e. availability of funds, manpower and administrative regulations.

Some words have to be said about administrative regulations which affect our Institution. ITB in its present form is a government institution, in the sense that the government provides the funds (almost 90 per cent.) and its uses are dictated by existing regulations. Furthermore, the staff members are civil servants and are subjected to the existing laws which govern all aspects of personnel management, including its salary scale. Within this rigid frame a certain autonomy, mainly in the academic field, exists, which is guaranteed by the University Law.

It will be clear that under such conditions various constraints are likely to be expected. Legally the situation seems to be at an impasse and innovative steps are needed to break through this barrier. That is why our efforts are not legalistic in approach, rather they are based on an understanding of a possible change in the basic structure of the legal aspects of our existence. We hope that in doing so the problem of funding could also be resolved.

After some critical considerations, we have proposed a basic change in the administrative set-up of the Institute. Instead of a government-owned institution, we have envisaged a broader base of ownership, i.e. by the Government and the public. This should be reflected in the Governing Board of the Institute. We have proposed a Governing Board which will include representatives of the Government, the public and the university community. This Governing Board will be responsible for setting up basic policies, including the development of the Institute and funding. The Rector of the Institute will be responsible to this Board.

Funding becomes then not only a government responsibility but is a matter of concern for the public also. The funding of the Institute is expected to come from the following sources:

(i) Government budget allocations,
(ii) Public support and grants,
(iii) Tuition fees,
(iv) Foreign grants and loans, and
(v) University contracts.

The last item is part of the funds accrued through the Institute's business operations. Activities in this area cover a wide field: sponsored research, engineering services (consulting and design), and manufacturing on a job order basis. We hope that in the future government allocations and tuition fees will decrease relative to other sources.

Implied in the administrative reform proposals is the fundamental concept of 'full autonomy of the Institute with social control and participation'. This will alter the basic pattern of management of the Institute in a structure which will enhance its inner working towards the attainment of its objectives. In particular, the aspect of manpower, which we consider to be one of the critical factors, will be favourably affected.

Measured in terms of numbers, the situation of our manpower at present (high level as well as lower level) is reasonable. By Indonesian standards, we are quite well off. One basic problem is that the level of their salary, as determined by the civil service salary scale, is very low and insufficient to maintain a decent standard of living. Various problems confronted by us in the field of personnel have its roots in this. Staff members, in order to support their families, have to find various other means of employment, very often on the Institute's time. Since this has been going on for many years (although the situation has markedly improved in the last two years), it has become more or less a way of life, and it is a management problem of the first order. Unless the Institute can come up with sufficient funds 'to buy their time back', all other measures will not be effective.

In the development of our staff, we are also faced with problems which can be broadly categorized as expansion and quality improvement. It has been estimated that by 1981 the number of staff has to be expanded three to four times the present number. Its distribution into fields of study has also been estimated. On the matter of quality improvement, critical problems exist. This is mainly due to the lack of training opportunities, preferably abroad. This problem is particularly acute for certain branches of engineering.

We consider the development of our staff in terms of quality and quantity to be of prime importance and our planning is based on a staff development approach. As a policy, the development of our staff becomes top priority and this is reflected in our development budget. As a matter of fact, this is one of the biggest items of expenditure due to the high cost of overseas training.

Needless to say, we are faced with limited resources and in order to utilize these to the fullest and in the most efficient way, a policy based on priority scaling is needed. The cost effectiveness method has proved to be a powerful tool. Complete objective quantification forms the basis for the use of this method, and objective models are not always easy to find in particular with contraints on time. Our planning staff have employed a modified version of it. It is called the 'quasi-analytical method', whereby objective quantification is combined with subjective judgment as working models. It was found that a consistent frame of reference could be obtained and reasonably unambiguous decisions could be made on the determination of priorities.

Using this method, all fundamental policies concerning the development of planning factors, its interrelation, cost, etc. could be formed, which in general constitute our development plan.

The task of planning our Institute is a painful one. We went through different stages and our experience has taught us that in order to plan effectively, at least two conditions should be fulfilled:

(i) Total commitment of the top management towards the need for planning, and

(ii) The creation of a well-qualified staff for planning. A group of about five people (senior and prestigious members of the staff) led by a systems engineer, has proved to be most effective. This group should report directly to the head of the institution and be backed up with sufficient funds.

After the plans have been drawn up and basically approved, the next step is the acceptance of the plan by the university community. This is clearly the task of the head of the institution.

Our experience has indicated that acceptance and approval of the university community did not come easily. A period of critical review prior to acceptance was needed. It took us about three months of critical review before the plan was finally approved by the Senate.

Planning is a continuous process and a drawn-up plan is used as a guide for implementation. In its implementation, situations are met which render it necessary to make tactical changes along the way. Therefore, continuous readjustments have to be made. Moreover, in our development plan, where programmes are implemented with different scope and degrees of control, unexpected situations are likely to arise. Some are on the national level affecting legislative changes (administrative reforms and the quest for autonomy), some are on the ministerial level (the quest for budget allocation), while others are internal and within our control.

In order to facilitate the administration of the Institute, a Development Board was set up. This Board is an advisory body to the Rector of the Institute and its main concern is to coordinate the various aspects of the implementation of the development plan, including its budget. Such a board has proven to be effective at our Institute.

As a final word on the implementation of the plan, something has to be said about the academic community as we experienced it. The basic plan as adopted by the Senate is necessarily broad in scope. On the other hand, the plan for implementation, refined by the Department Board, is definitely more specific and direct. Success in implementation will greatly depend on the acceptance of those specific measures by the academic community.

It has been heartwarming to note that their cooperation has been obtained, even in matters affecting their own privileged positions. This has been achieved through careful tactical manoeuvring, and we have found out that good communications is of prime importance. It seems that the key to success is in the creation of conditions where the sense of participation of the academic community, including the students, is enhanced. This might be difficult at the beginning but the efforts and time spent on it are certainly a worthwhile investment.

CONCLUDING REMARKS

Since the approval of the development plan by the ITB Senate, steps have been undertaken to pave the way for its implementation. It turned out that we needed the whole year of 1972 to have everything prepared for the commencement by January 1973, e.g. ministerial approval, new curricula, restructuring and relocation of staff, and election of deans and department heads.

A very important instrument, which facilitated the implementation of the changes in the ITB programmes and organization, was the decree of the Minister of Education which proclaimed that ITB was to be a pilot project for the improvement of science and technology education for the next five years. This pilot project status means that ITB is allowed to carry out its basic changes as formulated in the development plan. This covers a wide range of changes, including regrouping the twenty-one departments into three faculties: the Faculty of Sciences which has the Departments of Mathematics, Physics, Chemistry, Biology, Astronomy, Meteorology and Geophysics; and Pharmacy; the Faculty of Civil Engineering and Planning which has the Departments of Civil Engineering, Geodesy, Architecture, Regional and City Planning, Sanitary Engineering, and Fine Arts; and the Faculty of Industrial Technology which has the Departments of Electrical Engineering, Mechanical Engineering, Chemical Engineering, Industrial Engineering, Engineering Science, Mining Engineering, Petroleum Engineering, and Geology.

PART III

GENERAL ISSUES

UNIVERSITY EDUCATION IN SINGAPORE: THE DILEMMA OF THE MALAY-MEDIUM EDUCATED

*Sharom Ahmat**

THE DILEMMA

The 1966 Singapore Sample Household Survey shows that Malays who had completed university or college education, locally and abroad, totalled only 462 persons, as compared to 14,725 for the Chinese and 2,209 for Indians and Pakistanis (see Table 1). In 1966 none of the university-trained Malays came from Malay-medium education. Yet ever since Malay-medium pre-University classes were started in 1965, ambition to acquire a university degree has been growing progressively. Even Malay teachers began to take HSC examinations in Malay with a view to going to the university, and in this way advance themselves professionally.[1] However, progress has been very slow indeed. The better graduates from the secondary schools have since 1965 gained places in HSC classes but their results unfortunately are far from encouraging (see Table 2). Out of this group, only fifty-eight have, between 1967 and 1972, gained admission either to the University of Singapore or Nanyang University[2] (see Table 3).

The dilemma of the Malay-educated *vis-a-vis* university education is firstly one of numbers. This group of Malays therefore feel that it is imperative that more of them must succeed in gaining admission and graduating from the local universities. To them this is vital not only because they believe that a university degree will stand them in better economic stead in society, but that this is also important for the purpose of presenting a better image of themselves in a plural society. But what is perhaps most heartbreaking is the fact that just as Malay-medium students are beginning to make their mark in university education, they have found themselves out of step with the realities of development in Singapore. Changes in the economic structure of Singapore have caused a big shift from the traditional disciplines offered in the Singapore

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[1] The Singapore Malay Teachers' Union confirmed that only one Malay teacher who had gone through his education entirely in Malay, under the old structure, had succeeded in obtaining a university degree. This teacher is currently studying for his Master's Degree in Education at London University.

[2] During the same period 1967-72, about twenty-five Malay-medium students have gained admission to Malaysian universities.

TABLE 1

PERSONS AGED TEN AND OVER WHO COMPLETED THEIR EDUCATION: BY RACE

	Total	Chinese	% of Total	Indians/ Pakistanis	% of Total	Malays	% of Total
Still in primary school	192,945	156,385	81.0	11,990	6.2	22,062	11.4
No education	348,887	286,718	82.1	17,832	5.1	43,277	12.4
Uncompleted primary education	321,515	264,191	82.1	21,647	6.7	34,028	10.5
Completed primary education	273,948	216,527	79.0	18,162	6.6	33,477	12.2
Uncompleted secondary education	104,587	80,800	77.2	9,639	9.2	9,392	8.9
Completed secondary education	97,889	71,037	72.5	7,883	8.0	4,427	4.5
Uncompleted university or college education (local)	720	516	71.6	127	17.6	52	7.2
Completed university or college education (local)	13,729	11,460	83.4	1,257	9.1	410	2.9
Uncompleted university or college education (foreign)	916	498	54.3	130	14.1	26	2.8
Completed university or college education (foreign)	6,893 *	3,265	47.3	952	13.8	52	0.7
TOTAL	1,361,979	1,091,397	80.1	89,619	6.5	147,203	10.8

TABLE 2

NUMBER AND PERCENTAGE OF MALAY MEDIUM STUDENTS OBTAINING FULL HSC, 1966-70

Year	School Candidates			Adult Education Candidates			Private Candidates		
	No. Sat	No. Passed	%	No. Sat	No. Passed	%	No. Sat	No. Passed	%
1966	5	2	40.0	nil	nil	nil	20	1	5.0
1967	49	28	57.1	nil	nil	nil	41	3	7.3
1968	38	15	39.5	nil	nil	nil	77	6	7.8
1969	72	11	15.3	84	1	1.2	65	2	3.1
1970	62	16	25.8	75	2	2.7	57	3	5.3
1971	70	21	30.4	104	6	5.8	54	3	5.6
TOTAL	296	93	31.4	263	9	3.4	314	16	5.1

TABLE 3

NUMBER OF FIRST YEAR MALAY-MEDIUM STUDENTS IN SINGAPORE UNIVERSITIES, 1966-72

Year	University of Singapore	Nanyang University
1967	2	nil
1968	15	11
1969	5	4
1970	3	4
1971	3	2
1972	9	nil
TOTAL	37	21

universities to that of applied science, and engineering.[3] The Malay-medium students in the two universities, however, are almost entirely in the Faculty of Arts and Social Sciences,[4] a field which in view of current national needs, is low down the priority list. This is the painful dilemma of a relatively backward community caught in the momentum of development, where by the time it is ready to participate, events have overtaken them. Thus although within the context of the Malay community there is no doubt that there is need for more arts and social science graduates, in the society at large the premium for such graduates is relatively low.[5]

[3] In a speech to the University of Singapore Engineering Society, the Minister of State for Education, Dr. Lee Chiaw Meng, pointed out that the government granted most of its scholarships and awards to students pursuing engineering studies. Of the 54 President's Scholars (Singapore's most prestigious award) so far, 33 (or 61%) had been awarded for engineering. And of the total of 536 scholarships and other awards offered by the Public Services Commission between 1968 and 1971 for undergraduate and other basic training, 302 (56%) were for engineering (*Straits Times*, July 1972).

[4] Between 1967 and 1972 only two out of fifty-eight are not in arts and social sciences, one in law and one in accountancy.

[5] This can be illustrated by the case of a Malay school teacher who gained admission into the University of Malaya in 1972. He was granted half-pay leave from the Ministry of Education on the condition that he read economics and history. In the course of registration he found that his combination had to be predominantly Malay studies. This candidate had to withdraw from the University as the Ministry could not justify the need for any more Malay studies graduates.

The situation has also been worsened in the eyes of the Malays by the decision of the Government to phase out the Malay Studies Department in Nanyang University. Since 1967, twenty-one Malay-medium students had found places in Nanyang University, reading Malay Studies, but now one of two doors to university education has been slammed in their face. Beginning with the academic session 1972/73 no Malay Studies students were enrolled; thus in two or three years' time, the Department will no longer exist. This is yet another example of the dichotomy between Malay aspirations on the one hand and national needs and expectations on the other. Reasons for this decision as advanced by the Vice-Chancellor included the lack of demand for Malay Studies at Nanyang University, and hence it was uneconomic to continue with it. Nanyang University was also keen not to duplicate courses offered at the University of Singapore. Finally, it was suggested that employment opportunities for these graduates were not good.[6] Although some of these reasons are far from convincing, and indeed no proper study of the employment opportunities of such graduates had been made, the Government nonetheless was concerned with the possible problem of unemployed Malay graduates. Malay organizations educational, social and cultural together with individuals have all voiced unhappiness with this particular episode, but the Government has stood firm, and soon there will be no Malay-medium students in Nanyang University.

One of the elements in the developing Singapore ideology which the Government has persistently emphasized is that of meritocracy. Simply, this meant that advancement in life in whatever field must be based on a person's merit, not on wealth, status or influence. In the context of a multi-racial society which is still as yet not fully Singaporean, this concept of meritocracy is essential in ensuring the commitment of all races to the Republic. On the other hand, however, this concept when implemented strictly, as it is in Singapore, has also a backlash effect. This is because meritocracy works fairly only when the competitors start off at the same take-off point. In this case where the Malay community is so clearly behind the others in the race towards progress, meritocracy has the effect of leaving them even further behind. Indeed this can be the effect on all groups of people who are underprivileged, irrespective of race. In the field of university education many Malay-medium candidates, already battling against various odds, find themselves unable to gain admission because no exception can be made when the criterion is merit. I do not suggest that the Malay-medium students who have not reached the sufficient standard be given a chance, but some slight adjustment to the already very high standard of admission, but still way above the theoretical minimum, would

[6] *Berita Harian*, 14 January 1972.

not be too much to expect.[7] Once this slight concession is made at the point of entry no more leeway must be offered. Having been given the opportunity such students must compete on equal terms with others.

Finally, one other recent development which had caused concern to the Malay-educated is the apparent unpreparedness of the Ministry of Education early in 1972 in coping with the demand for Malay-medium HSC classes.[8] The 1971 Malay School Certificate results had been exceptionally good, and hence the number of students eligible to go on to HSC classes far exceeded the provisions made by the Ministry. Interestingly, it was now suggested that if more teachers were available, additional classes could be opened.[9] It appeared that only after some pressure and perhaps re-thinking that two additional classes were opened, and a further two under the auspices of the Adult Education Board were also started.

These are some of the major problems confronting the Malay-medium educated regarding their hopes to achieve a university education. But the roots of the dilemma lies in history. Hence the following sections attempt to analyze past developments in assisting us to understand the present.

MALAY VERNACULAR EDUCATION 1819-1945: A HISTORICAL PERSPECTIVE

In 1819, Malay education in Singapore existed only in the form of Koran classes.[10] The Koran school was merely 'the house of some renowned teacher, the parents supply each of their sons with a sleeping mat and pillow, a cooking pot and a sack of rice'. The school curriculum consisted of only three one-hour lessons, 'one after the early morning prayer, the other after the midday devotions and the third after vespers'. The nature of the lessons can be described as learning to repeat the Arabic formulae correctly, studying the Arabic alphabet for purposes of reading the Arabic prayers and texts, and memorization. Although the Koran was the key in the education process, it did mean that the teachings of Islam were imparted. This was because all that was required was knowledge of the text, not necessarily its understanding. There was also the practical part of education where the students assisted in the planting, and harvesting, mending of nets, hunting game and perhaps the art of metal and woodcraft. As far as results were concerned, these classes produced a small number who became religious teachers or mosque officials.

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[7] The minimum qualification required for entry into the University of Singapore is one principal level pass (i.e. GCE 'A') and two subsidiary level passes (i.e. GCE 'O'), but no one with just the minimum will gain admission since the University entry requirements have progressively become stiffer with keener competition.

[8] Encik Ghazali bin Ismail, Parliamentary Secretary to the Ministry of Education had, in 1970 given the assurance in Parliament that there was no further need to expand the number of pre-university classes in Malay schools to meet demand as from 1971. According to official estimates, he added, sufficient places would be available in and after 1971 for all candidates who qualified for places in pre-university classes.

[9] This was the reply of the Minister of State for Education, Dr. Lee Chiaw Meng when the Member of Parliament for Kembangan, Haji Ariff Suradi asked if an HSC class could be started at Tun Seri Lanang Secondary School (*Berita Harian*, 8 March 1972). In 1960, when the PAP opened the first Malay Secondary School, the argument was that the classes must first be opened, the teachers will come with the demand.

[10] See for instance, A.H. Hill (translated), 'The Hikayat Abdullah', *JMBRAS*, Vol. 28 Pt; 3 (1955), pp. 42-47.

Stamford Raffles, 'aghast' at this system, attempted to introduce secular education in Malay, but this did not materialize.[11] It was not until 1834 that the first formal Malay medium school – the Singapore Free School – was started. However, this school had a very brief existence for in 1842 it closed down. In 1855 another attempt was made to establish a Malay-medium school. With the Temenggong of Johore and Governor Blundell each contributing $1,500, a private vocational school for Malay boys was started at River Valley Road, and two Malay schools – Telok Blangah and Kampong Glam Schools – were also established. The Kampong Glam School was progressing quite well in the 1860's, but it later degenerated into a Koran school. The Telok Blangah School, however, was more successful. In fact it became the forerunner of a 'high' school with an English class, industrial class, and later became a 'college' for the training of teachers for Malay schools.

From 1874 British policy served only to retard Malay education. Although some quantitative progress was made, nothing of a qualitative nature came about. Initially there was the attitude that an enlightened government must provide its subjects with an education. Malay schools were also justified, for example, by W.H. Treacher, Resident of Perak, on the grounds that it would provide a 'supply of native subordinate officers to take up appointments which now, not without difficulty, are filled by youths educated in India and Ceylon'.[12] More significant, however, was the revelation that 'District officers and Inspectors of schools should lose no opportunity of impressing upon scholars and their parents . . . that the vernacular education brought to their doors by a liberal government has not for its main object the manufacture of clerks, but that a lad who has gone through the school training is likely to be a better padi planter, trader, miner or sailor than one whose early years have been passed in idleness in the village lanes.'[13]

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[11] G.G. Hough, 'The Educational Policy of Sir Stamford Raffles', *JMBRAS*, Vol. 11 Pt. 2 (1933).

[12] E. Sadka, *The Protected Malay States, 1874-1895*, Kuala Lumpur, University of Malaya Press, 1968, p. 29.

What this means was that Malay education should be purely for the purposes of preserving the Malay traditional ways of life. This indeed was the policy followed throughout the period of British rule. It was advocated that at best, what the Malays required was perhaps an improved vernacular education, but above all else, this should also prevent or discourage him from leaving his land. It was in this belief that E.W. Birch appeared so jubilant when he reported in 1912 that elementary vernacular education was very satisfactory because it 'did not over-educate the boys . . . . In one year, out of 2,900 lads who left the vernacular schools almost all followed the vocation of their parents or relatives, chiefly in agricultural pursuits.'[14] R.O. Winstedt, often looked upon as the 'modernizer' of Malay education, in actual fact was no different. In a way, his contribution to Malay education was to circumscribe its educational progress so as to ensure that the Malay peasant did not get ideas above his status. Winstedt regarded the vernacular schools as essentially vehicles for only the most elementary instruction. Consequently, what he did was to reduce the number of years spent in receiving such education and to give vernacular instruction-a strong manual and agricultural basis. In line with this, he recommended that the fifth standard in Malay schools be abolished because it merely produced boys who think they ought to be Malay clerks, but are inadequately trained. In addition he recommended that instruction in drawing, horticulture, and at least one industry be given a central place in the syllabus.[15] As Professor W.R. Roff has appropriately commented, 'It could of course be argued that Winstedt's revised vernacular education was eminently suited to people whose future necessarily lay in peasant agriculture. Equally, however, it had to be conceded that it fitted them for very little else.'[16]

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[13] *Ibid.*

[14] Quoted in Tay Gaik Yeong, 'British Policy Towards the Malays in the FMS: 1920-40', Unpublished MA Thesis, University of Malaya, 1969, p. 48.

[15] See 'Report by R.O. Winstedt, Assistant Director of Education, SS and FMS on Vernacular and Industrial Education in the Netherlands East Indies and the Philippines', Straits Settlements Legislative Council Proceedings, Council Paper No. 22, 1917; also, R.O. Winstedt, *Education in Malaya,* London, 1924.

[16] W.R. Roff, *Origins of Malay Nationalism*, Kuala Lumpur, University of Malaya Press, 1968, p. 140.

A PERIOD OF INDECISION, 1951-8

After World War II, the return of the British brought no change to Malay education. Malay students could only study up to Darjah VII (Standard VII, which is primary education), and the Government made no attempt to extend the Malay school system beyond the primary level. To add on to this, Malay leaders of the time resisted any attempts to bring about changes which they considered would dilute the purity of Malay education. This period therefore saw a futile ding-dong battle going on between Malay leaders and the Ministry of Education. The Government, out of political expediency, ultimately succumbed to Malay demands. It can be said therefore, that in the post-war period the Malays themselves, perhaps reflecting the euphoria of political developments in Indonesia, contributed to the stagnation of Malay education. The furthest these students could go was to the Sultan Idris Training College (in Tanjong Malim, Perak) for the boys, and the Malacca Women's Training College for the girls to be trained as primary school teachers.

The first hopeful change in British policy towards Malay education came in 1951. Realizing that the structure of Malay society had changed after the war, the Government felt that the Malays, if they wished to compete effectively with the other races, had to acquire an adequate command of the English language. Hence the introduction of what was called the Reorientation Plan.[17] Briefly, this plan proposed that Malay students would use Malay as the sole medium of instruction only in the first three years of school although English would be taught as a subject. From the fourth to the seventh year, all subjects except for Malay language and literature would be taught in English. Successful students could then qualify to enter special Malay classes in English-medium schools at Standard V level. From there they could go on to both academic and vocational secondary schools ending up in the Senior Cambridge examinations. In this way employment opportunities for Malays would be equal to others, and tertiary education would also become open to them.

When the orientation plan became public, Malay response to it was one of suspicion as it was looked upon as an attempt to stifle the Malay way of life. Some Malay leaders expressed fear that such a scheme would make Malay students adopt new values which would conflict with that of their parents, traditional Malay thinking and aspirations. Slowly, it was argued the intermingling with other races in English-medium schools would make these students Westernized thereby forgetting their own habits, customs and traditions. Ultimately both Malay education and Malay culture would disappear. For example, the Singapore Malay Teachers Union, perhaps out of fear of redundancy, called for the abandonment of the plan. No alternative was suggested except that the old system should continue. The culmination of Malay protest was the formation of the Malay Education Council in July 1955.[18]

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[17] See Zahoor Ahmad b. Hj. Fazal Hussain, 'Policies and Politics in Malay Education in Singapore 1951-59, with special reference to the Development of the Secondary School System', unpublished M.Ed. thesis, University of Singapore, 1969, Chapter II.

As a counter proposal, the Malay Education Council presented their plan for Malay education.[19] What this plan proposed was the retention of Malay as the medium of instruction throughout the seven years although English would be taught as a subject. In addition is also wanted the introduction of moral education and Islamic knowledge to be taught from Standard I and Jawi from Standard III. Those who passed Standard III and wished to transfer to English-medium schools should be allowed to retain their standard by entering special English classes. This plan also advocated the setting up of:

(i) Malay secondary schools, for those who completed Standard VII. For those interested in handicraft and vocational training, they should be transferred to vocational schools: Malay secondary school gràduates, between the ages of 17 to 19, could be selected as pupil teachers in Malay schools, and after two years they should go to the Teachers' Training College.

(ii) Malay colleges, where those interested in journalism and the arts would be given facilities and opportunities to continue their studies for three years.

(iii) A Malay university, for the graduates from the colleges and secondary schools.

This plan in effect wanted the *status quo* to be retained as far as primary education was concerned. It was argued that the emphasis on English as a medium of instruction was unrealistic in view of the fact that the quality of staff teaching English in Malay schools was poor, and that the syllabus and English textbooks used were of a low quality. Equally true of course is that the *status quo* would condemn the Malays to where they were. The call for

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[18] In April 1954, five Malay bodies—UMNO (United Malay National Organization), Peninsula Malay Union, Singapore Malay Teachers Union, Federation of Malay Students and the University of Malaya Muslim Society—met and formed the Singapore Malay Education Joint Committee. In July 1955 this Committee convened a meeting of 52 Malay and Muslim organizations to further discuss the fate of Malay education, and it was out of this meeting that the Malay Education Council was born. The Council, however, was not registered by the Government until 1957.

[19] Zahoor Ahmad, *op. cit.*, Chapter III.

Malay secondary school was, of course, a logical extension of the school system, but to also expect the establishment of Malay colleges and a Malay university was an idea moved more by emotional and political reasons rather than by educational considerations.

As a result of continuing Malay opposition and also because of the Government's indecisiveness, the Reorientation Plan was scrapped in 1956. In the same year a set of compromise proposals was presented by the Lim Yew Hock Government.[20] Emphasizing again the inevitable need for a good command of English for Malay students, this proposal suggested that for the first three years, Malay will be the medium of instruction, but from the fourth year both English and Malay be used as parallel media for all subjects except Malay language and literature. Mathematics and science would be taught in English. For the first time the Government also made proposals for Malay-medium secondary schools which would lead to the Senior Cambridge and Higher School Certificate examinations. Here, too, the principle of dual media of instruction would be pursued. In addition to this, arrangements were also proposed to ensure that the quality of teachers in these schools would be improved and that opportunities of departmental scholarships for teachers to go to the University of Malaya be provided.

There was no immediate response from the Malay Education Council to the proposal, but in October 1956, UMNO (a partner in the Coalition Government) sent Lim Yew Hock an ultimatum either the Malay Education Council Education Plan be implemented by the beginning of 1957 or UMNO would withdraw from the Government. This very radical stand taken by UMNO had been forced upon them as a result of very adverse Malay criticisms against the party *vis-a-vis* their stand on Malay education. UMNO in fact had been accused of being a traitor to Malay education. Faced with an impending crisis, the Lim Yew Hock Government decided, for political reasons, to give way. A statement from the Minister of Education, Chew Swee Kee, announced the restoration of Malay as the medium of instruction throughout Malay primary schools, and the proposal to set up Malay secondary schools with English to be taught progressively at both stages. But as the Minister also added, this was done out of political necessity and 'it cannot be defended on educational grounds and is contrary to the wellbeing of the community in general and the Malays in particular'.[21]

In the meantime, some form of Malay secondary education was introduced. In January 1956, three Malay secondary classes were opened at Siglap Secondary School where the medium of instruction except for Malay language and literature was English. The following year, another centre at Tanjong Katong Malay Girls' Secondary School was opened. This attempt at Malay secondary education met with severe criticisms from the Malay Education Council which pointed out that the only thing Malay about these classes was that all its students were Malays. What they feared was that the Government would use this as an excuse not to proceed with the opening of Malay-medium secondary schools. *Utusan Melayu* also joined in the fray, accusing the Government of deceiving the Malays.[22] Finally, in June 1958, the Government decided to relent and settle all outstanding issues with the Malay Education Council. This in effect was a hollow victory for the Malays because after seven years it has brought them nowhere. To make matters worse, the Government took on an indifferent attitude towards Malay education, an attitude which helped to continue the crippling effects on Malay opportunities. The Government's stand now was that Malay students who completed Standard VII could compete for places in English secondary schools including the Junior Trade School. And according to the Director of Education, the Malay Education Council should be bluntly told that Singapore could not afford to provide secondary education for all who wanted it; the number of places must be limited and they should be reserved for those who were best able to profit from such education. In effect, what this meant was to shut the door to secondary education for the vast majority of the Malay-medium students.

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[20] *Ibid.*, Chapter V.

[21] Quoted in *ibid.*, pp. 103-4.

Thus the eight years from 1951 to 1958 can be characterized as a period of indecision where on the one hand the Government meant well in terms of trying to equip the Malays with more relevant forms of education, but because of its weakness was unable to implement its programme. On the other hand, the Malay leaders, unsure of what type of education was desirable, either struck for the traditional or were asking for the unrealistic. Unfortunately, they were able to have their way by exploiting the political weaknesses of the Government. But in the last analysis, the ones who suffered were the Malay students, who after all the fuss and controversy have not been able to take any forward, progressive steps.

A PERIOD OF HOPE, 1959-65

In 1959 the Peoples Action Party came into power, and with this new political era, Malay education received very positive encouragement and support. From 1956 the PAP had made its stand on Malay education very explicit. Commenting upon the White Paper on Education Policy (1956), it stated categorically that Malay education must not only be developed beyond the primary level as soon as possible, but that it should also enjoy undisputed priority over any other language as the compulsory second language to be taught in all schools.[23] The PAP stand on the role and status of the Malay language was equally clear. It had criticized the 1956 Education White Paper because of its emphasis on the English language, rather than reflect the position of Malay as the common national language of the country. In its place the party advocated that instead of a free choice of a second or third language, Malay should and must be the predominant language in this country.[24] In the PAP Fourth Anniversary Souvenir publication in 1958, an article signed 'A Malayan founder member of the PAP' argued the importance of a common culture in the formation of a national identity. In terms of education policy, this means the acceptance of Malay as the national language so that the ideal could be achieved when Malay becomes the comprehensive means of expression and communication in all fields of national life. Consequently, whatever roles the other languages Chinese, Tamil and English play, they must be subsidiary to the role of the national language.

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[22] Editorial, *Utusan Melayu*, 31 January 1957.

Such a categorical stand on Malay education and Malay language was of course basically prompted by political expediency. The PAP wanted to achieve independence through merger with the Federation of Malaya, and this cannot succeed if the role of Malay was ignored in Singapore. The PAP also realized they had not merely to fight to remove British control but 'we must also resolve the . . . fears which make the Malay majority in the Federation not want the Chinese majority in Singapore' (PAP Sixth Anniversary Celebration Souvenir, Singapore, 1960). The PAP therefore set out to justify the importance of Malay. It argued that

> . . . a *lingua franca* is necessary, and moral, political and practical considerations make Malay, rather than English, the obvious choice. The alleged inadequacy of the Malay language as a *lingua franca* is not disinterested propaganda . . .

Thus in formulating its education policy in 1959, the PAP among other things stressed the 'acceptance of Malay as the national language'. It also promised 'provision for its study both for students and adults' so that 'Malay will become the second and not the third language for non-Malays'. Finally, the policy also assured 'the revitalization of Malay medium education'.[25]

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[23] *Singapore Legislative Assembly Debates*, Vol. 2 (1956-68), First Series, p. 72.

[24] *Ibid.*, pp. 71-72.

[25] Policy speech by Yang Dipertuan Negara (Sir William Goode), 1 July 1959, *Legislative Assembly Debates*, State of Singapore (Official Report), Part 1, First Session, Vol. 2,

From 1959 onwards the PAP Government implemented a number of measures to give meaning to their various statements regarding the position of Malay and Malay education.[26] In 1959 there were only 400 Malay teachers (or 4 per cent. of the total) having to look after 16,000 students in sixty-nine Malay schools, and a few classes in English schools. The first task of the Government was therefore to produce a sufficient number of teachers in order to be able to teach Malay as a regular subject in schools. With this in view, a special two-year course in Malay was inaugurated at the Teachers' Training College in which 1,560 students were enrolled. In order to assist in the development of the Malay language itself, the Government set up the Dewan Bahasa dan Budaya (National Language and Culture Institute). To ensure that Singaporeans took all this seriously, the Government made the passing of Standard I Malay compulsory for all teachers and civil servants before confirmation in service was granted.

As for Malay education, besides financial assistance, changes were made to its structure. To bring Malay schools in line with other streams, Standard VII was abolished. Malay-medium secondary classes were opened in four centres, and in 1960 the first Malay-medium secondary school with 136 students in four Secondary I classes was started. The problem of suitable teachers and textbooks, the Government felt, had been used as an excuse to postpone the establishment of secondary Malay schools. It decided therefore that a start had to be made; teachers and textbooks would come later with the progressive increase in demand. As a logical extension of the introduction of secondary education, the Ministry of Education began to plan for pre-university classes in Malay. In October 1963, it made a preliminary survey to find out the number of Malay-medium students who would join the proposed sixth-form arts classes to be started in 1964. A total of 211 students were surveyed; none responded. This is a very significant fact as it revealed that as late as 1963, Malay-medium students did not seem to be motivated towards university education, since the necessary prerequisite is a Higher School Certificate. Another survey was then conducted in June 1964. This time out

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columns 11-13. See also speech by Minister of Education (Mr. Yong Nyuk Lin), 17 July 1959, *ibid.*, columns 178-9.

[26] All this became the more imperative between October 1961 and August 1963 when negotiations for merger was taking place. And during the period when Singapore was part of Malaysia, Singapore's policy towards the Malays was even more favourable. At the same time of course the Singapore Malays were now emboldened by the expectation and fact of support for their Malay brothers across the causeway. As part of Malaysia the Singapore Malays were now no longer a minority.

of 1,231 Secondary Four students surveyed, twelve indicated that they wished to do sixth-form Science, and 130 Arts. With this more positive response, pre-university education in Malay began in January 1965. This means that the Higher School Certificate, the passport to university education, for Malay-medium students is only seven years old.

All these developments gave new life to Malay education especially in psychological terms. Talking to a number of the Malay teachers today, they recollect the bright and high hopes they had, and the enthusiasm about a good future for Malay education. This is also reflected in the actual growth of population in Malay schools.

TABLE 4

Year	Secondary School Population	Primary School Population
1959	nil	15,784
1962	3,803	22,220
1965	6,343	28,247

What in retrospect tended to be overlooked, because of political necessity was the fact that these developments did not drive away the chronic problems of Malay education, the most acute being the problem of inadequate and underqualified teachers. In 1959 there were in existence three categories of Malay school teachers:

(i) Those trained at SITC and MWTC. This constituted the cream of Malay school teachers whose basic qualification was Standard VII. Between 1946 and 1956 (after which Malay teachers were trained at the Singapore Teachers' Training College), only 113 teachers were produced.

(ii) The category called teachers 'trained under other schemes' (TUOS). These were students not selected to SITC or MWTC, and had received only part-time training.

(iii) Temporary untrained teachers. These constituted holders of Standard VII certificates and non-Malays teaching English. In the main they were waiting for other jobs to come through.

All these categories were primary school teachers. Thus one can imagine the state of affairs when the Malay secondary schools were opened in 1960. In 1961 it was estimated that sixty teachers were required for the secondary classes. This became even more acute in 1963 when a second Malay secondary school was started. The Ministry of Education introduced various schemes to staff these schools, but as can be expected success was limited. Special increments as inducement to Malay teachers to teach in Malay secondary classes were offered. Special training to upgrade the standard of the existing teachers were introduced, as was special training for English-medium Malays to equip them to teach in Malay schools. Finally, two types of scholarships to the university were offered in order to get graduate teachers: first, special scholarships to serving Malay teachers, and second, special scholarships to read Malay Studies which were opened to all teachers.[27] Added on to this problem, was the lack of suitable Malay textbooks and reference books. This was ironically aggravated by the new policy of common content syllabus and curricula. It was bad enough for the primary level; it was worse for the secondary. It is no surprise therefore that the Malaysia Certificate of Education results for the years 1963-5 were poor, not only in percentage passes, but more important, in the quality of passes as Table 5 clearly indicates.

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[27] In 1960 when Malay secondary education started, there was not a single Malay graduate teacher. In 1963 there were only two such teachers out of a total of 160. The following table illustrates the level of training and education of Malay school teachers in 1963:

Level of Training/ Education	*Trained*	*In Training*	*Untrained*	*Total*
University graduates	2			2
Normal/Certificated	59	157		216
SITC (Sultan Idris Training College)	147			147
MWTC (Malay Women's Training College)	42			42
TUOS (Trained Under Other Schemes)	231	423		654
Religious teachers			26	26
Malay teachers (old and untrained)			5	5
Part-time teachers			3	3
New recruitment			18	18
TOTAL	481	580	52	1,113

TABLE 5

MALAYSIA CERTIFICATE OF EDUCATION RESULTS, 1963-5

Year	No. Sat	Div. 1	Div. 2	Div. 3	GCE (3 or more credits)	Total Passed	% Passed
1963	1,564	25	125	426	38	614	38.70
1964	1,482	15	107	522		644	43.45
1965	1,190	15	74	401	14	504	42.50
Total	4,236	55	306	1,349	52	1,762	

A PERIOD OF RADICAL CHANGES: 1965-72

At a luncheon speech in May 1961 the Prime Minister of Malaya, Tengku Abdul Rahman, declared that sooner or later Malaya, Singapore and the Borneo territories should come to closer 'political and economic cooperation'. The Singapore Government immediately gave an official welcome to this proposal, and in August the Prime Ministers of Malaya and Singapore announced their agreement in principle to a merger. In July 1963 merger became a reality. With Singapore in Malaysia, and in veiw of the Malaysian policy regarding Malay language and education,[28] this aspect of education in Singapore, as we have seen, continued to flourish. And so this was yet another instance in which political considerations worked to the advantage of Malay education in Singapore. But this was not to last. Political issues between the two brought about the dissolution of the union of Singapore and Malaya. On 7 August 1965 the separation agreement was signed, and Singapore's independence was proclaimed two days later.

The friction and conflict of the two years when Singapore was part of Malaysia revealed the dangers of communal bitterness, and in January 1966 a constitutional commission was appointed to consider how the rights of racial linguistic and religious minorities could be adequately safeguarded by being written into the new Constitution. The aim was to create a 'united, multi-racial, free and democratic nation in which all its citizens have equal rights and opportunities' and to guard against 'discrimination on grounds of race, descent, origin or religion'. In this respect the Commission rejected the idea of electing special representatives for minority communities as a retrograde step. Instead it recommended that the best means of safeguarding minorities was to make all citizens equal before the law, with no discrimination, no restrictions and at the same time, no privileges. It did, however, also recommend the continuing recognition of the special position of the Malays as the indigenous people.[29] Hence Article 89(2) of the Constitution of Singapore states that the Government

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[28] The use of Malay as the national language is one of the prime objectives of national policy in Malaya, as it is considered to be a fundamental instrument towards national unity. Consequently Malay is a vital feature of the Malaysian education policy.

> . . . shall exercise its functions in such a manner as to recognize the special position of the Malays, who are the indigenous people of the State, and accordingly it shall be the responsibility of the Government to protect, safeguard, support, foster and promote their political, educational, religious, economic, social and cultural interests and the Malay language.

Despite these ideological and constitutional assurances the situation after 1965 changed radically which could not but adversely affect Malay education. The politics of the period immediately after separation has been described as the politics of survival, that is, the survival of an independent sovereign and economically viable Singapore.[30] This obsession with survival is understandable when one considers that this island state is only 225 square miles, with no natural resources except commanding a strategic location, 78 per cent. Chinese in population, and where 25 per cent. of her gross national product then was dependent on trade. The argument for merger rested on the basis that an independent Singapore would not be economically, militarily or politically viable. Now that Singapore was independent the same problems became more serious and more urgent.

In order to reshape Singapore as a viable entity, the PAP Government demanded uncompromising support for the creation of a democratic multiracial, multi-lingual and multi-cultural society. The Republic had also to be drastically restructured. The PAP was also intent on building up a 'rugged society', tightly organized and infused with resoluteness, determination and a dedication to training, skill and discipline. A campaign to inculcate these new values so that Singaporeans would come to terms with the notion of change has been going on since then.

In trying to reshape Singapore's plural society so that there will be close interaction between value systems and the process of modernization, emphasis was placed on the education system.[31] The revised objectives of education, while essential to bringing about the desired transformation, meant also that the role of Malay education must fall in line, and the special attention given to it cannot continue. In order to create a sense of national identity and through this, loyalty to the nation, stress was laid on common curriculum and Singapore-oriented textbooks. To promote multi-racialism, multi-lingualism and multi-culturalism, the principle of equality of treatment had to be strictly enforced, multi-lingualism introduced and measures taken to encourage inter-ethnic mixing. In order for these two objectives to be achieved the Government cannot place Malay language and Malay education above the others, and hence a marked change from the period 1959-65.[32] For economic needs, the education system had to train students in the technologies of the age and expose them to modernizing concepts. This could only be done by emphasizing technical and scientific studies, and in this respect education in Malay, already weak in the academic stream, just could not cope with the new developments.

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[29] *Report of the Constitution Commission, 1966*, Singapore, 1966.

[30] See Chan Heng Chee, *Singapore: The Politics of Survival, 1965-67*, Singapore, Oxford University Press, 1971 (Oxford in Asia Current Affairs series).

[31] S. Gopinathan, 'Towards a National System of Education in Singapore, 1945-70', unpublished MA thesis in Education, University of Singapore, 1971, Chapters IV and V.

The changed circumstances coupled with the fact that the problems of Malay education (discussed earlier) remained largely unsolved brought about a decline both qualitatively and quantitatively. The results of the Malaysia Certificate of Education after 1965 went downhill progressively.

TABLE 6

MALAYSIA CERTIFICATE OF EDUCATION RESULTS, 1966-9

Year	No. Sat	Div. 1	Div. 2	Div. 3	GCE (3 or more credits)	Total Passed	% Passed
1966	1,308	6	35	299	13	353	27.0
1967	1,470	2	21	257	5	285	19.4
1968	1,216	3	34	276	12	325	26.7
1969	210		3	38		41	19.5

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[32] In 1965-6, however, PAP leaders continued to reassure Singapore Malays. For instance, two days after independence, on 11 August 1965, Prime Minister Lee Kuan Yew stated that '. . . there will be equality of races but Malay would remain the national language and existing Malay privileges would continue . . . and steps to raise the economic and educational standards of the Malays'. The continued choice of Malay as the national language was also dictated by the recognition that developments in Singapore will continue to be closely linked with politics and development in Malaysia and to a smaller extent, Indonesia. Thus Encik Othman Wok, the Minister for Culture and Social Affairs, told a session at a National Language Congress in August 1966 that 'the development of the National Language in Singapore should be carried in cooperation with neighbouring countries. This is the only way in which we can keep ourselves from being isolated. . . .'

Knowing that the traditional Senior Cambridge (or its equivalent) is no longer the passport to ready employment, particularly if it is academic in nature Malay-medium graduates found themselves in a dilemma. This is further compounded by the fact that not only is the number of secondary school graduates small but their quality is also very poor. In the seven years from 1963-9 only 66 out of a total of 8,440 (this is less than 1 per cent.) obtained a Division I; 399 were awarded Division II (about 4 per cent.), whilst 2,219 (or 25 per cent.) obtained Division III.

No comprehensive study has yet been made regarding what these Malay school leavers are doing in terms of economic activity. But one study has indicated that many of these students are forced to take on jobs which most of their English-medium counterparts with similar qualifications are spared.[33] This lack of economic value of Malay education is recognized by both Malay parents and students. In a survey conducted by the Malaysian Sociological Research Institute, it was discovered that 82 per cent. of the 100 secondary students surveyed acknowledged the fact that there is no economic force behind the Malay language, and said that they would like their children to go to English schools.[34] It is not surprising therefore that the intake of students into Primary I Malay schools has been declining to a point when it will soon be nil.

TABLE 7

INTAKE OF PRIMARY I MALAY SCHOOL STUDENTS, 1963-72

Year	Intake
1963	5,127
1964	4,750
1965	4,848
1966	5,249
1967	3,857
1968	3,025
1969	2,002
1970	1,000
1971	876
1972	553

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[33] Abu Bakar b. Afiar, 'Malay School Leavers in Singapore', Academic Exercise, Department of Social Studies, University of Singapore, 1968.

[34] G.I. Gunn and S. Gordon, 'Malay Secondary School Students Survey Findings', *Intisari*, Vol. III No. 3 (1969).

THE WAY OUT

Perhaps the important thing that must come about amongst the Malay-educated is a radical change in their attitude towards university education. There seems to be a *mystique* about the university in many Malay minds in terms of this being the ultimate in educational ideal. This is abundantly clear when one talks to them about education. This is also reflected in the contents of a number of letters which appeared in the Malay press criticizing the phasing out of the Malay Studies Department at Nanyang University. Likewise the definition of an intellectual to the Malays is always a university graduate and oftentimes this cannot be further from the truth. Singapore Malays must realize, as many do, that in the context of the present economic structure and the developments in the near future at least, a student trained in technology even at a level lower than university, may very well be better off than a mediocre arts and social science graduate. Thus while all encouragement must be given to Malays to go to the university in the relevant fields, positive encouragement must also be geared in the direction of getting more and more Malays to go into the technical stream with a view at least to going on to the Technical Institute and the Polytechnic. This is the main area of salvation, and the Malay-educated must not lose out again.

But how can one achieve this in view of the relatively lower quality of Malay-medium education, and the relatively limited opportunities for technical education in the Malay medium?[35] One of the hard facts of life that must be faced by Malays in Singapore is that as a minority, they cannot expect the Government to work out a system which will be suitable for them; rather they have to adopt and fit in with the system. Irrespective of what had been promised before, the fact remains that inspite of the PAP policy of equal treatment to all the four mediums of education, the utilitarian value of English has meant that English education is more valuable. The second language, unless it is English, has not become the tool for greater communication between the different ethnic races. Malay, which is supposed to serve as the *lingua franca,* has in fact been abandoned, and it is Singapore's national language in name only. It is in fact English, by virtue of being the main language of administration and economic life, that is becoming the *lingua franca.* Indeed it has been suggested that English should be the regional language since 'English had been the meeting ground for the leaders and the peoples of the different countries' and because 'English was not the mother tongue of any of the countries of the region and therefore had acquired a sense of neutrality'.[36] The increasing importance of English therefore is the trend, and this is what the Malays must equip themselves for. This change must come about now because the fillip given to Malay education by the PAP had been purely motivated by political necessity. Separation and internal political and economic changes have seriously devalued the use of Malay and the Malay-educated. Finally, Malay-medium education has shown that this is not the solution to the problems of socio-economic backwardness of the Malays; if anything it may well exacerbate the situation.

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[35] There is only one Technical Secondary School which teaches in the Malay medium.

Malay parents over the years have shown progressive awareness of the futility of Malay-medium education, as shown by the decreasing enrolment in these schools. Recently, the Singapore Malay Teachers Union, the traditional vanguard of Malay education, one of the biggest obstacles to change in the 1950's, have come out with a proposal for the setting up a National Education System.[37] This must have been a very painful decision to make, one arising out of a crisis of conscience. But the Union, seeing the progressive decline in Malay education and its lack of economic value, had to come to terms with reality.[38] They understood that it would be extremely difficult to fight for the equal recognition of Malay-medium certificates for purposes of employment. And in the context of an independent Singapore it is impractical to expect Malay to become a *lingua franca.* Hence the proposal that Singapore should do away with its policy of four-medium education, and replace it with a unified national system in which:

(i) English will be the main medium of instruction.

(ii) Malay being the national language should be made a compulsory subject. At the primary level this means one period (of 30-35 minutes) per week, and at the secondary, two periods (of 45 minutes each).

(iii) The study of a student's own mother tongue and the literature in the same language. (For Malay students this includes the study of religion in Malay.) The rationale behind this suggestion is that Singapore students must know their own language and literature so that they will know themselves culturally. Learning their own mother tongue is necessary and is in line with Singapore's policy of promoting multi-lingualism.

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[36] Rahim Ishak in *Straits Times,* 15 June 1971; *New Nation,* 28 April and 8 June 1971.

[37] 'Kertas Kerja Sistem Pelajaran Nasional' (Working Paper on a National Education System) in the 25th Anniversary Souvenir Programme of the Singapore Malay Teachers' Union, 1972.

[38] This problem is also faced by Chinese education and more acutely by Tamil education. The ascendancy of English therefore is commonly felt by vernacular schools collectively.

> At both the primary and secondary levels this would involve seven periods a week.

Whatever the weaknesses this proposal may embody, it certainly did not deserve the misinterpretations it aroused.[39] The fact remains that if such a system is premature at the present moment, Malay schools must take steps to go it alone. Indeed in some schools this is being done by using more of English not only as a second language but also as a medium of instruction in certain subjects, particularly science and mathematics. One progressive principal has even thought of transferring students after two years of secondary education in the Malay medium, where increasing use of English is introduced, to the English stream in the third year. But such students would be required to repeat the standard in the English stream in order to enable them to catch up. There appears to be great merit in such a scheme although it would mean that these students will have to spend an extra year.[40] Malay-medium students chosen to study in the sixth-form National Junior College are already required to study all subjects, except Malay language and literature, in English. As from 1972, the General Paper is the other subject which will be offered in Malay. In 1971, ten such students took the examination with 50 per cent. success, a percentage much higher than those who took the examination purely in Malay.

This change may indeed be the only salvation if Malay-medium students are to have a better chance for university education. As indicated earlier, it is just a matter of time before Malay-medium education will phase itself out in Singapore. But in the meantime, the fate of one generation of students cannot be left to languish. Here the PAP government must adopt a much more constructive role in providing the necessary transitional steps for Malay-medium students, if for no other reason, at least out of moral responsibility. It is after all the PAP which between 1956 and 1965 had so strenuously argued for Malay language and education. Now that the scenario has changed, it does not mean that the obligations and responsibilities of a government have changed too. As had been clearly expressed by the Minister of State for Foreign Affairs, Encik Rahim Ishak, when he wrote in the December 1966 issue of *Petir*,

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[39] On the one hand the above proposal has been condemned by some Malays as an irresponsible step. The Secretary-General of the Malay Education Council is particularly vehement against the proposal. On the other hand the Government has interpreted it as irresponsible for different reasons. The Foreign Minister, Mr. Rajaratnam, described the proposal as something which played right into the hands of chauvinists (*Straits Times*, 26 April 1971).

The Prime Minister, Mr. Lee Kuan Yew, went further when he said:

> We must nip some of these problems in the bud. Take the recent Nanyang Siang Pau agitation, heating up Chinese language and culture issues. We acted. By a remarkable coincidence, the Malay teachers were at the same time campaigning for a 'national type' of school, using English as the medium of instruction. Malay compulsory as second language. All Chinese schools were to be closed! They were both playing some one else's game. They both stopped, but only after they knew we meant business. By the time we were prepared to act against the majority, every one else got the message. (*New Nation*, 7 September 1971.)

[40] An indirect indication of the merit of an additional year can be seen from the fact that the first batch of Malay HSC students took three years instead of two before sitting for the examinations. The HSC results for 1967 as seen from Table 2 have never been equalled since.

> The Malays today, consequent upon Singapore's separation from Malaysia, were placed in a dilemma of being in a minority relatively poor and backward, and yet living in a region where people of their own race, religion, culture and language, predominate and decisively hold sway in their political lives. Under the circumstances, we must try to understand deeply and with the utmost sympathy this enigmatic frame of mind the Malays are in for no fault of their own. It is important that we find a long-term solution to this problem of theirs, that is of being isolated, so to speak, in their own home country . . . .

However, in the last anlaysis, it must be the Malays themselves who must get out of the bonds of a value system which is inconsistent with a changing situation. Happily there are signs that this is happening in Singapore.

SENCE AND SCIENCE IN ENGLISH LANGUAGE TEACHING: A PERSPECTIVE AND A PROPOSAL FOR SOUTHEAST ASIA*

*Lloyd Fernando***

I

Almost everywhere nations have incorporated a second widely-used language into school and university syllabuses as the principal way of equipping their citizens with the flow of information which now takes place on an unprecedented, even instantaneous, scale. Whole education systems are being carefully adapted and transformed to take account of the vistas of knowledge opened by the technological age, even as it is being outstripped by a newer, technetronic one. The aim is to instill national ideals and national awareness through the first language and, through the supporting language, to equip students with an understanding of the huge advances being made.

We have a preliminary definition of how the various countries of Southeast Asia are seeking to translate such aims into practice in *English Language Testing: Report of the RELC Fifth Regional Seminar.*[1] This collection of papers, discussions, and workshop reports from a seminar held in Bangkok in 1970 will, one hopes, be the basic material for smaller district or national seminars in all the countries of the region. At the least, it should be required reading in all training colleges and university departments dealing with English language teaching. However, to say that it has the characteristic of a first progress report is to indicate both its value and its limits.

In the *Report* representative speakers outline the educational history and describe the present state of English teaching in their respective countries. It is abundantly plain that clear-headed appraisals have led the people of Southeast Asia to an act of deliberate choice in the matter of English being the supporting international language. For Indonesia, Dutch may have been the language of traditional scholarship, but English is now taught instead, for 'science and knowledge' (*Report,* p. 24).

Other countries having English only as a first or second foreign language in schools, like Laos, Thailand, and Vietnam, have greatly strengthened the emphasis on the language in their education systems for similar reasons (*Report*, pp. 29, 51, 55). The pooling together of such views is an invaluable first step in tackling the major problems related to English language learning and teaching in the region. A tacit consensus among all the countries appears to have been reached independently of each other and on hard pragmatic grounds. One now needs to examine the immediate practical implications for planners, teachers, and students alike.

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[1] Edited by Roy Cherrier, SEAMEO/RELC, Singapore, 1971. Hereafter referred to as the *Report.*

The differences in the approaches of individual countries may only be analyzed when more extensive evidence becomes available. For the moment, all one can say is that even the necessarily brief accounts of national educational objectives (*Report*, pp. 31-71) demonstrate that it is not at all likely that a uniform system of supporting language education in English will emerge in all countries, nor is it desired. The actual content of the various English language syllabuses, and the relative importance given to English in the different national examinations, are matters far too complex to be dealt with here. Questions even of pedagogy are closely related to national education policies, many of which are in the process of being redefined. One needs, primarily, a close knowledge of national conditions — historical, social, political, economic, and cultural — to make comparisons which can be illuminating as well as helpful. Statistics, too, are as yet in short supply. Educational goals must be analyzed, and the basic emphases which are desired in keeping with national ideals must be understood. Nevertheless, the general consensus that English is needed for effective regional and international communication, for movement and exchange of personnel, for employment, and for higher education, is a major gain in the search for a definition of common ground. We now have sufficient warrant to clarify certain vital issues for the sake of perspective and good language sense.

There are three broad problem areas concerning English language learning and teaching which the Southeast Asia countries must jointly resolve.

(i) The first concerns the clarification of linguistic authority. On the one hand, Southeast Asians have a choice of British or American usage at the moment to resolve doubtful questions about correct use. Good language sense suggests that they should, in addition, anticipate and make provision for the emergence of a Southeast Asian variety. On the other, they must realize quickly that the science of linguistics is powerless to deal with the challenges of English language teaching beyond elementary levels. Here again, they must allow their own practical definitions of their needs to play a much larger role.

(ii) Following from this, the planning of their courses must aim at the goal of *language behaviour* rather than mere *linguistics competence*. The latter refers mainly to testable items; the former to the actual capacity of the learner to use the language both in and out of the classroom.

(iii) Arising out of the foregoing, the countries must urgently explore the possibility of standardizing *levels* of language behaviour in a manner mutually intelligible and useful to each other. This will require formulating ideas about a series of language *performance models* relevant to Southeast Asian needs.

This essay examines each of these three issues in turn, and ends with an outline proposal for co-ordinating English teaching goals at the national level in the Southeast Asian region. English language syllabuses in schools are left out of the discussion, since these are matters for the separate national education authorities.

II

THE CLARIFICATION OF LINGUISTIC AUTHORITY

English Usage: the Limits of British and American Authority

The Bangkok Seminar did not discuss at all the new phase on which English has embarked through its adoption as a supporting language in the countries of Asia.[2] In the hands of new users the language is bound to undergo striking changes. Dialect varieties will probably spring up, certain characteristic marks of pronunciation and usage will emerge, and it will collect new words from the region. To keep such developments under manageable control, Southeast Asians need to clarify their thinking about authorities for lingustic correctness. The few incidental remarks which did crop up on this subject in the Seminar (*Report*, p. 109) suggest that no deep thought had been given to it. One of the participants offered 'native speaker competence' as sufficient authority, but this begs the question, besides revealing a poor sense of history. Anyway, there are countless Asians to-day with a better command of the language than countless so-called 'native speakers'.

Perspective and good language sense must begin with a relation of the present to the past. Historically, the notion of standard usage for English was the subject of dispute between the English and the Americans for more than one hundred and fifty years. Vigorous American use and innovation eventually overcame British conservatism which had insisted that standards of usage were questions for the British alone to decide. Only in the last forty years has this wrangle about linguistic authority resolved itself somewhat, with the emergence of a variety of educated usage common to both sides of the Atlantic — although differing significantly on either side in matters of pronunciation, idiom, and relative formality or informality. One major lesson was learned from this quarrel — that complete independence of linguistic usage could allow a dialect variety to dominate at the expense of intelligibility outside the boundaries of the country concerned. Then the very purpose for adopting the language — its value for communicating across frontiers — would be defeated.

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[2] See my essay, 'Standard English in Asia: the Issue of American Influence' in C.D. Narasimhaiah (ed.), *Asian Response to American Literature*, Delhi, 1972, pp. 429-37. Originally presented at a seminar in Srinagar, India, in June 1970.

The moral of this *résumé* is that planners and teachers must take far greater account of the fact that standard English usage is once again in a process of dynamic change. Initially, English usage in the different countries of Southeast Asia will be determined by a historical slant in one of two main directions — the British or the American variety. While the first is mostly to be found in Malaysia and Singapore, one is likely to hear the latter in the Philippines or among the increasing numbers who have returned from education in the United States. To complicate matters, however, one must remember the vast army of petty tradesmen, merchants, students, and the semi-literate who speak an argot picked up from the cinema, the television set, and the ubiquitous American military machine. Essentially, therefore, the countries of the region will hover between British and American norms, but for the purposes of teaching, it may be wiser to stick to the variety each already has.

Still it is inevitable that changes will come. Southeast Asians will not seek to vary usage simply for the sake of being different. But they should anticipate that even as they hold to either British or American standards, they will imperceptibly vary them. The challenge will be for teachers to decide which variations indicate vitality and freshness, and which slovenliness. In the nature of things, examples of the latter will be infinitely more numerous. Whatever is the case it will be Southeast Asians who will establish, over a period, allowable differences arising out of the Asian temperament and speech habits, while guarding universal intelligibility.

This process has now begun in Malaysia and Singapore with the planned takeover of the School Certificate and Higher School Certificate Examinations in English in 1974. A phrase slipped into one of the English language syllabuses in Singapore mentions, revealingly, the requirement of 'a knowledge of current English usage as applicable to present-day Singapore' (*Report*, p.45). For independent countries these are natural developments. Teachers and planners must be aware of the professional responsibilities they entail.

The Limitations of Linguistics

The emergency of the 'Pill' (a trade-marked acronym for Programmed Instruction Language Learning), the machine, the laboratory, the box, which represent, in the main, minute areas of language skill designed to be instilled by rote, has led to delusion in many influential planning quarters that it is only a matter of time before 'total mastery' of the language may be achieved by similar means.

A sober analysis of the language teaching manuals and other materials prepared by linguists shows that the most impressive contribution of linguistics to language teaching has been only in the beginning stages of learning a language. Thus we now know that it is important to identify and graduate phrase-structures and sentence-structures, to compile equally graduated vocabulary lists ranging from basic to specialized, and to order our teaching in accordance with these discoveries. The development of language laboratories has been a boon to teachers. They may now deal with huge increases of students by confiding the individual rote work, which constitutes such an important element in the earliest stages of language learning, to the pre-packaged lesson-sequences administered by the teaching machines. In an era when there is a phenomenal thirst for learning languages, linguistics has broken the back of the most urgent problem, that of detailing methodically effective procedures for giving beginners a headstart in the language in a comparatively short time. In this respect, language teaching and learning have undergone a minor revolution, and linguistics itself has earned a permanent place in a curriculum for language teachers. For Southeast Asia, these developments are of immense significance and will enable us to deal with the vast numbers of beginners in the language.

There are, however, too many who are excessively awed by these developments, and tend to believe that the entire process of language learning may be — or has been — similarly codified. The doctrine of transformational grammar, one of the cardinal tenets of linguistics, has been a bad influence, leading pseudo-scientific intellectuals to await the day when the whole of the English language would be represented like a series of connected mathematical propositions from basic axioms to the most abstruse permutations. Unfortunately the news has not reached those on the ground yet that the propounder of this doctrine, Naom Chomsky, has made a significant recantation. In his book, *Aspects of the Theory of Syntax* (1965), he wrote:

> We have a certain amount of evidence about the character of generative grammars that must be the 'output' for the acquisition model for language. This evidence shows clearly that taxonomic views of linguistic structure are inadequate and that knowledge of grammatical structures cannot arise by application of step by step inductive operations (segmentation, classification, substitution procedures, fillings of slots in frames, association, etc.)

> of any sort that have yet been developed within linguistics, psychology, or philosophy.

Entirely appropriately, this view was recalled in the Bangkok Seminar by Bonifacio P. Sibayan in his paper which was the subject of the first plenary session (*Report*, pp. 11-22). But declaring it would be 'suicidal' to 'pursue its implications' for language teaching (*Report*, p. 11), Mr. Sibayan reaffirmed blindly his faith in generative grammar, and went on to the more amenable topic of testing. Unfortunately, the discussion which followed took a similar view regarding testing — that for the sake of 'manipulating the data', test developers had to 'fall back on taxonomic classification'. It looks remarkably as if the participants pretended that Mr. Sibayan's bomb had not exploded in their midst.

The first implication of Chomsky's counter-revolutionary declaration is that the manufacturers of 'pills', machines, boxes, and laboratories are not likely to promise — or to deliver — anything much in advance of the numerous learners' courses now available. For the rest of the curriculum for an English language student, we must look to a balanced combination of good language sense and scientific method, and not depend on the latter alone. What Chomsky is saying is that after the initial stages, we have no conveniently divided 'scientifically' justified — segments which can be methodically instilled until total mastery is achieved. More important, progressively-ordered segments, even if 'scientifically' discovered, are not a reflection at all of the sequence in which a language is actually learned.

Linguists have now no option but to lift the moratorium they had tacitly imposed on the study of the more complex levels of the English language. (The most complex level of any language, of course, is its literature.) Near total knowledge of all 'grammatical structures' can only be claimed by those who are also familiar with the rhetorical devices so much a part of the essense of all language behaviour at all levels, from the everyday to the highly specialized. While these devices are present in concentrated form in works of literature, they unobtrusively inform the speech of ordinary — even uneducated — native speakers in the most mundane situations.One suspects it is this fifth-column characteristic of language pervading even the (lower, pragmatic) functional levels which has sabotaged the construction of a linguistic monolith, and led to Chomsky's rueful admission. There is warrant for this suspicion, in view of the rush to investigate the ways in which very young children pick up a language, for they break all the rules and learn it faster than any scientist can catch them.

We may put these remarks in another way. The total language is what we have, and the total language must be the conspectus of linguists, planners and teachers. So far they have concentrated only on those elementary bits which can be arranged in a manner bearing a resemblance to scientific method. These segments, into which the language is divided for teaching purposes, are reasonably clear-cut for the initial stages, but become progressively less discernible on strict linguistics grounds the more of the language we wish to learn or teach. The root cause of the problem is the nature of language itself which cannot be absorbed in a sterilized learner-machine/teacher situation except in the elementary stages. Beyond that, language becomes language behaviour and demands inclusion and understanding of the context of actual use. Once context is brought in, the science of linguistics loses its penetrative power and use.

B.F. Skinner anticipated this conclusion by nearly twenty-five years and sought to formulate a science of 'verbal behaviour', but now that that concept too is discredited, the way is open at last to reintroduce into language learning the humane meanings of contextual uses of language. Modern analytical philosophy, rigorously pursuing logic in ethical statements, was driven to take similar recourse in 'contextual implication'. And Wittgenstein, as all students of language philosophy know, led his colleagues out of the morass of logical atomism with his slogan 'Don't ask for the meaning, ask for the use.' Linguists have fought shy of context as they once did of meaning, presumably because both stubbornly resist scientific precision. Now they should take heart and adopt Wittgenstein's slogan with a small but significant change: 'Don't ask for the segment, ask for the use.'

Another paper in *English Language Testing* by Eugene J. Briere (pp. 133-8) suggests that this approach may at last be on the verge of earning recognition. Briere's three-layer distinction of language competence, although described in typical linguistics fashion, will raise a cheer among those who have always maintained that vitality of use illuminates the whole of language, and therefore does not disappear from whatever parts into which it may be divided — unless misguided objectivity excises it in a separate operation. (Literature specialists have had to wait for over thirty years for linguists to come to this point.) Language learning, teaching and testing, Briere declares, must deal with (i) the kind of linguistic meaning traditionally the concern of Chomsky, (ii) implicit meaning relating to context, and (iii) implicative meaning relating to the psychology of language use. In the interests of interdisciplinary harmony, one may accept this way of describing what have always been among the fundamental preoccupations of students of literature. Briere's hopes for a breakthrough on an interdisciplinary basis are not unfounded. The Seminar too, sensed that a breakthrough was necessary but did not know how it could come about (*Report*, p. 22). The truth is, it was presented to them in Sibayan's and Briere's papers, but it could not help looking back.

The time has now come to destroy a shibboleth about linguistics. It is far too easily believed that one who has made a deep study of linguistics without any special training in English will be a better teacher of the language than one who has not. The drawing up of detailed syllabuses in History, for example, is naturally entrusted to those who have acquired at least B.A. level degrees in the subject. It is a matter of serious concern that a similar achievement is not commonly expected for parallel tasks in English. Rather, these duties have been habitually entrusted to pure linguistics specialists, regardless of their lack of an academic background in English. As a result, the concerns and the problems arising out of the scientific study of language have overwhelmed those relating to English language learning and teaching. We have actually marked time while, out of deference to linguists, we have taught and tested only linguistic competence.

III

LANGUAGE BEHAVIOUR

It is therefore language behaviour which is our quarry, and this, in itself, is a functional description. The term 'functional' has been badly misused in the past. No doubt it was inspired by realities that could not be ignored: pressure of student numbers, urgent reorganization of educational priorities, the absence of a co-ordinated approach to language teaching problems, and so on. But the pressing needs of the moment have too often led to the construction of so-called functional courses based only on fragments of language related to the students' special field of study, and leading as a result to a mutated competence at best.

As a first principle of the new functional English, it is helpful to recall a point in the discussion that followed Robert B. Kaplan's paper, 'English Language Testing for University Entrance'. It was found that

> ... experience in the United States and United Kingdom tends to indicate that a basic minimum of general language proficiency is required for success in any field of study but beyond that minimum the student's success seems to depend on his ability in his field of specialization rather than on special language competence [in that field]. (*Report*, p. 118.)

Now since language behaviour is our goal we should aim, first of all, at teaching this general language proficiency in actual, ordinary use. We will not aim at mere linguistic competence because the exact reproduction of specific items which linguists and testers have found manipulatable is not proof that a learner knows how to use them actually. At every stage beyond rote work, therefore, we will not only drill particular structures, Pavlov-fashion, into our learners — the traditional preoccupation of linguists — but more important, we will try to ensure that the learners are able to *use* them flexibly in anticipated situations in their everyday lives. In addition to the drills, the teaching programme must include carefully chosen exercises designed to illustrate the flexible uses to which these structures may be put. Finally, there is no substitute for informal activities designed to further the learning process. Plays, stories, conversations, films, radio listening, television viewing, these must supplement formal language study at every stage. It is mainly in such informal uses that the vitality of the language strikes a responsive chord in the learner and triggers off obscure 'inductive' ways (used in John B. Carroll's sense, *Report*, p. 129) by which all learners take hold of a language.

If such supplementary exercises and activities can be so designed as to include a high frequency of structures which the student has already learned, well and good, but the really important aim is to enable the student to draw more fully on his own language learning capacities, of which neither he nor any one else will have full knowledge. It is the behaviour of the language in actual use, rather than its rules and particularities, to which any language student is most kin. The language learning courses by the 'total immersion' method have grasped and exploited this essential point.

IV

STANDARDIZED LEVELS AND PERFORMANCE MODELS

What remains for us to do is to examine whether standardized levels of language behaviour may be formulated in a graduated scale closely related to the uses and needs of the countries of Southeast Asia. The levels we choose will include descriptions of the degree of linguistic competence to be achieved, no doubt, but will extend to the total English language performance ability that we may expect at each level in our users. We will use the term *performance models* as being the objective of syllabuses describing these levels.

No theoretical carving up of the English language will give us a language performance model. Such a model, by definition, must be drawn from an actual real-life example. That is, we must identify some *kind* of person whose communication competence we wish students to achieve. We must identify several such kinds of persons to represent graduated levels of English language competence, so as to cater to different individual capacities, and the varying needs of a country. Our choices, because they will be taken from actual life, will not be capable of either exhaustive or scientific definition — although certainly there is ample room for research there. But as the *Report* says, a loss of some (scientific) objectivity may result in a gain in insight. At the very least there will be a positive programme for action.

We shall not look to England or the United States for these representative types because they would be too far removed from our experience, and will have gone through an education system without the kind of bi- and trilingual challenges ours face. We must rather look at ourselves and pick our types or models from countries where a high standard of English has been maintained over a period of time, because they will show us what can be achieved in circumstances we are reasonably familiar with. As far as the English language is concerned, these circumstances are not likely to get any better.

One is understandably reluctant to make this kind of selection on the grounds that it may be invidious. But there is no alternative, especially as the traditional experts, the linguists, concede their inability to offer help. Anyway, I feel certain that there is enough academic disinterestedness among ourselves to make our selection from among ourselves on the basis of habitually achieved and demonstrated English language competence. We can rest assured that in this respect, no further inference may be drawn from the selected country or countries about its or their education system(s) as a whole because no research has been able to demonstrate any correlation at all between language competence and general academic superiority.

With these qualifications, then, it will readily be seen that three of the countries of Southeast Asia could provide us with the models we seek: Malaysia, Singapore, and the Philippines. Despite important distinctions between them, all three have large numbers of students going through their entire school and university education in English. A very big field of research is indicated here: the comparison of English language competence, level for level, in the English-medium systems of these countries. The students in whom we are interested will have had the optimum possible conditions in Southeast Asia for learning English. Not only would they have had specially allotted time for advancing their knowledge of the English language itself, they would also have been learning nearly all their other subjects in the same language as well. Presumably, even outside the classroom, most of such students' informal and leisure time activities would have been furthered in English. And finally, for a great majority of them, the use of the English language would have preponderated in the home, even to the extent of becoming virtually a first language.

We have been noting factors and conditions over which linguists have little control and less provision for in drawing up either programmes of study or their corresponding tests, for these factors are the incalculables that contribute to the total language behaviour of these students. If we should decide to have a series of ten performance models (Levels 1-10, from lowest to highest) we could begin to outline the principal features of a programme for co-ordinating English teaching goals. For our first level, Level 1, for example, we would make an acceptable composite from a study of the language behaviour or, say, the upper half of the English-medium passes in Form III of Malaysian schools, and comparable class levels in Singapore and Philippine schools all together. There is room for both statistical study as well as good sense here. From the statistical population for this level, a carefully-defined sample would be chosen for intensive investigation of the principal aspects of their communication competence (language performance) both formal and informal.

For pragmatic reasons, the formal language examinations should not be tampered with excessively, but the description of the informal aspects of language behaviour common to the selected students will be the real challenge. Offhand, one would say that at this level the student will be able to comprehend and respond to the popular content of all the media with ease and live with a group of real students of this level in any of the three countries, using the English language only. Obviously, we have no easy task, but we have no other course open to us in our search for a practical model of language behaviour with a sufficient range to allow for different conditions in the three different countries and yet be, within the limits of that range, or common meaningfulness. Research must begin here, and will no doubt, take some years to complete. But meanwhile it is better to offer a skeleton of the whole scheme so that we may be able to see what needs to be done, and the total clarification and wholly pragmatic value which is likely to ensue.

We have seen in outline the kind of objective we are after, by way of performance models. The accompanying Table shows how such models can be related to the declared utilitarian needs of the countries of Southeast Asia. A few examples are given below of what is meant to be covered under each column heading in the Table:

Technical/Vocational:	Electricians, Draughtsmen, Electronics specialists, Mechanics, Building contractors, Foremen, Woodwork designers, Owners of small businesses.
Commercial/Professional:	Salesmen, Secretaries, Nurses, Advertising personnel, Professional non-degree training courses in Southeast Asia.

STANDARDIZED PERFORMANCE MODELS O

PRELIMINA

			ENGLISH FOR NON-DEGREE CAREERS					ENGLISH	
LEVEL	EQUIVALENT: Upper 50% of English Medium students in Malaysia, Singapore or Philippines who have passed the examinations listed below	SUGGESTED DURATION of intensive course (Minimum 5 hours per day, 5 days per week	Technical/ Vocational	Commercial	Managerial	Communications	Non-degree training courses overseas	Pre-university	B.A. in South-east Asia (without English Literature specialization)
1		9 months	X	X					
2	Passed at the end of 9 years of school e.g. Form III (Malaysia)		X	X					
3		9 months	X	X					
4	Passed at the end of 11th year of school, e.g. Form V (Malaysia)		X	X	X	X	X		
5		6 months			X	X		X	
6	Passed at the end of 13th year of school (pre-university), e.g. Cambridge Higher School Certificate including General Paper in English 1–5 (Malaysia)				X	X			X
7	Passed at the end of 3 years of University study for 1st degree, e.g. B.A. Hons. (Malaysia) (No English Literature)	6 months							X
8	Passed English literature in pre-university study at the end of 13th year of school, e.g. Cambridge Higher School Certificate English Principal A–E	6 months							
9	Passed English literature in 1st degree, e.g. B.A. Hons. English literature (Malaysia)	Normal 3 years in a university offering this							
10	Completed higher degree in English language or literature, e.g. M.A. (Malaysia)	Normal 2 years in a university offering this							

LANGUAGE BEHAVIOUR FOR SOUTHEAST ASIA

TABLE

OR HIGHER EDUCATION			ENGLISH FOR TEACHERS							
Higher degree in Southeast Asia (without English Literature specialization	B.A. overseas (without English Literature specialization)	Higher degree overseas (without English Literature specialization	Primary school teacher (or for years 1–6 of school	Secondary school teacher (or for years 7–11 of school	Training college lecturer (without English specialization)	University lecturer (without English specialization)	Training college lecturer (English language specialist)	University lecturer (English language specialist)	University lecturer (English literature specialist)	Ministry of Education planner of English
			X	X						
				X	X					
					X	X				
X	X					X	X			
	X	X					X	X		
								X	X	X
									X	X

Managerial:	Marketing officers, Development officers, Hotel managers, Managers (various) in business firms.
Communication:	Reporters, Radio/television producers, Editors, Foreign service personnel, Politicians, Interpreters.

The remaining categories deal with higher education, teacher training (from primary to university level), and government planning of English programmes. It is important to make provision for the latter two, since the main burden of English teaching must and will inevitably fall on a given country's nationals (although foreign teachers of English will no doubt be recruited for special assistance).

This programme is intended entirely for mature students who have completed at least eleven years of schooling in their own national systems, and have been taught in the national language of their respective countries. Many will have gone beyond. Nearly all will already have been exposed to varying amounts of English. Special proficiency tests (similar to the American Test of English as a Second Language) should be devised to assess each student's level of performance in the language so that he may be directed to the next level (rather than be required to begin automatically at Level 1). The courses for every level, when designed, will be highly intensive, bordering on the 'immersion' method. Five hours per day for five days per week should suffice for formal sessions, but there should be suitable breaks during each course, totalling not more than, say, four weeks for every six months.

The guiding principle is that students will be taught in an atmosphere where English is used in all formal and informal activities. The method has proved itself sufficiently with American foreign service and Peace Corps programmes in respect of foreign language learning and teaching, and the wonder is that it has not been more quickly seized upon by English language teachers, and by interested Ministries of Education. At the adult level there is no other way to ensure that learners obtain a major foothold quickly at each stage of the language than by immersion – since language behaviour is the goal, not simply the ability to pass certain objective or other tests designed for the convenience of testers.

Performance models are provided for three main areas: (i) English for non-degree technical, vocational, commercial, and professional training, (ii) English for higher education in Southeast Asia and overseas, and (iii) English for teachers (for primary school years 1-6, for secondary school years 7-11, for training college lecturers, university lecturers, and educational planners). The levels are planned to allow one to economize on the total number of English courses to be made available, and to reveal the degree of co-ordination that might be achieved. For example, a look at the Table will show that Level 4 caters *simultaneously* for (i) the best technical/vocational/commercial students, (ii) beginning managerial and communications students, and (iii) students going for non-degree professional courses overseas. However, since all the courses are intensive, time can be allotted regularly for special sessions devoted to the special English requirements of the students' intended careers, e.g. technical English, commercial English, writing for the media, scientific English, English for each of the various university disciplines, and so on.

Levels 1 and 2 together spread over nine months. It remains for investigation and practical considerations to dictate what portion of that time is required for each of these levels, or whether it is more practical to amalgamate the two levels into one level, provided the performance model is borne in mind. Similar considerations should affect the division of duration for Levels 3 and 4, and again for Levels 5 and 6. Suggested durations are just that — suggestions only. These — and the actual number of levels, too — may well be altered in the light of research and practical considerations. However, the total period of intensive study *from scratch* to Level 6 should not exceed two years — as indicated in the Table. Research and experience may well justify a shorter total duration. It would be unrealistic to provide for a longer duration.

This Table is offered only as a starting-off point for discussing — and resolving — a very difficult problem. A seminar limited to about twenty invited English specialists and planners will certainly be able to improve on it, or *revise it completely*. One hopes that implementation of a scheme such as this will not have to wait until every lacuna is filled. If the general plan is accepted, implementation will take place in six stages:

(i) A fairly exhaustive description of each performance model based on research into comparable sample populations for each level, drawn from the three countries: Malaysia, Singapore, and the Philippines. This may take about two years of full-time research.

(ii) The drawing up of syllabuses and preparation of extensive teaching materials for each level up to Level 8. A further two years of research will be needed.

(iii) The preparation of special proficiency tests to enable planners to direct students to the appropriate level. Two years of research, roughly concurrent with (ii) above.

(iv) The launching of a pilot programme of courses (limited to about fifteen students per course) lasting a maximum of three years.

(v) Follow-up checking to compare the language behaviour of students who complete Levels 2, 4, 6, 7, 8 with the respective performance models aimed at; modifications as necessary.

(vi) The setting up of an English college to run the entire programme dealing with two or three hundred students at a time, from the various countries of Southeast Asia. Branches concentrating on different levels may be set up in different countries.

If it is necessary for practical reasons to limit concentration of effort initially, Levels 3-6 would seem to be the priorities, considering they will serve the widest range of career needs.

The programme seeks to co-ordinate the entire field of adult learning of English in a manner suited to the needs of Southeast Asia and capable of being interchangeably used. When proper placement tests are devised a student can be graded according to this ten-point scale, and his communication competence will be immediately intelligible to all the countries of Southeast Asia regardless of the last national examination he took, or where he took it, or how many months or years he may have spent in school studying English. Of course, it remains for each country to decide approximately how many of its students will need training in English at each level of the Table, without exception. It is by fixing the relative proportion of these numbers from Level 1 to Level 10, and not, as is the present practice, by cutting off at a chosen level, that each country will define, on the best pedogogical and linguistic grounds, the nature of the functional role English will play in the education of its citizens.

HIGHER EDUCATION IN VIETNAM: CONSOLIDATION *VERSUS* EXPANSION

*Nguyen Truong**

INTRODUCTION

The current pattern of the educational system in Vietnam comprises five years of primary school preceded, in some cases, by one year of kindergarten; seven years of secondary school; and four to seven years of higher education according to the field of specialization.

Historically, higher education in Vietnam could be traced back to 946 A.D. (the date of its independence after a millenium of Chinese domination) with the institution of competitive examinations for the former Mandarin civil service system or, at least, to 1070-5 when the Van-Mieu (Temple of Literature) and the Quoc-Tu-Giam (National College) were established. The most striking feature of this system of education is its dominantly Confucianist content as the confluence of Chinese and Indian civilizations in the Vietnamese culture is a well-known fact. Examination syllabuses were mainly based on the Chinese classics although Vietnamese textbooks written in *nho* (i.e. Chinese characters pronounced in the Vietnamese manner) appeared in the eleventh century. Despite its rhetorical emphasis, the classical education did produce cultivated men and able administrators. However, with the last examination held in 1918, it had to yield to the new system spread by the French colonial authorities.

In fact, the root of the present system of higher education dates back to 1907 when a so-called university was set up in Hanoi. Being little more than a vocational school at the start, it was formally inaugurated by 1917 as the Indochinese University, and comprised schools of medicine and pharmacy, law and administration, education, agriculture and forestry, public works and commerce. A school of fine arts and a school of science were added in 1924 and 1941 respectively. In 1947, the school fo law separated from the University and shifted to Saigon. As a result of the 1954 Geneva Agreement, the entire university was reconstituted in 1955 in Saigon as the first National University. It was then followed by the establishment of a series of new universities: the State University of Hué (in 1957), the Catholic University of Dalat (in 1958), the Van Hanh Buddhist University (1964), the State University of Cantho (1967), the Minh Duc Catholic University (1969), the Hoa Hao University in Long Xuyen (1970), and the Cao Dai University in Tay Ninh (1971). Two others are also expected to be established in the near future in My Tho and Nha Trang.

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Also included in higher education are specialized institutes and technical centres, namely the National Technical Center at Phu Tho (1957), the National Agricultural Center (1959), the National Institute of Administration (1952), and the Oceanographic Institute (1933).

The total enrolment in these institutions reached a height of 47,021 in the school year of 1969-70[1] as compared with a total of 2,442 in 1954-5.[2]

The above-mentioned expansion in terms of institutions and enrolment has been achieved as a result of the interplay of a variety of pressures – economic needs, social and cultural aspirations, and forces that have their origin in the education system itself, of a newly-independent and developing nation. This expansion should be accompanied by corresponding qualitative improvement if the system were to meet the economic, social and cultural aspirations of the country characterized by an accelerating pace of change. Instead, the very acceleration of growth, particularly since 1954, under the existing constraints of physical and human resources and the influence of a ravaging war, has developed a wide range of problems in which quantitative and qualitative factors are intrinsically linked. As a matter of fact, the efficiency of an education system depends not on the rate of enrolment increase, but on how well it fulfills its social, economic, and cultural objectives and on whether it is adapting itself to the changing conditions both externally and internally. An accurate evaluation of its merit also requires a critical analysis of a variety of its components – who are educated, by what methods, in what knowledge and skills, with what results and at what costs. 'All this suggests that an overall process of reform concerning the structures, content and methods of education will have to be undertaken through a global innovation approach rather than through piece-meal and partial improvements or revisions.'[3]

That much being said, the author of this paper proposes to make a critical analysis of the present situation of higher education in Vietnam, identify its main problems and suggest ways, based on the existing constraints, to heighten its effectiveness.

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[1] Ministère de l'Education, République du Vietnam, *Rapport sur le développement de l'éducation au Vietnam pendant la décennie 1960-70,* Troisieme conférence regionale des Ministres de l'Education et des Ministres responsables de la Planification Economique en Asie, Singapour, 31 Mai-7 Juin 1971, p. 14.

[2] Howard Hayden, *Higher Education and Development in Southeast Asia,* Volume II, UNESCO/IAU, 1967, p. 242.

[3] 'Development of Education in Asia', in Ministère de l'Education, République du Vietnam, *op. cit.,* p. 9.

CURRENT SITUATION OF HIGHER EDUCATION IN VIETNAM

As mentioned above, higher education in Vietnam is provided by universities and specialized institutes and technical centres. As of now, there are three state universities (Cantho, Hue, Saigon), five private universities (Long Xuyen or Hoa Hao, Dalat, Minh Duc, Tay Ninh or Cao Dai, and Van Hanh), two centres (the National Agricultural Center and the National Technical Center), and two institutes (the National Institute of Administration and the Oceanographic Institute).

With the exception of the National Institute of Administration, all the other institutions are directly responsible to the Minister of Education. In the school year 1969-70, the total enrolment and staff were 47,021 and 1,535 respectively, broken down as follows (see Table 1):

(i) The (State) University of Cantho has five faculties: Law and Social Sciences, Letters (humanities and arts), Pedagogy (education), Sciences, and Agriculture. The University's total enrolment in 1968-9 was 1,992 with more than 60 per cent. of the students in arts and law, and enrolment in pedagogy and sciences about equal. While women formed 27 per cent. of the total enrolment, they numbered more than 40 per cent. in letters, 31 per cent. in pedagogy, 23 per cent. in sciences, and about 18 per cent. in law (see Table 2).

(ii) The (State) University of Huế has five faculties: Law, Letters, Pedagogy, Sciences, and Medicine. The total enrolment in 1968-9 was 3,297 including 22 per cent. female students, most of whom were in the faculties of pedagogy, letters and sciences (see Table 3).

(iii) The (State) University of Saigon has eight faculties: Law, Letters, Pedagogy, Sciences, Medicine, Dental Surgery, Pharmacy, and Architecture. Its total enrolment in 1968-9 amounted to 30,630 with about two-thirds of the students in Law and Letters. Female students accounted for 29 per cent., mostly in Pharmacy, Letters, Sciences and Law (see Table 4).

(iv) The University of Dalat (private and Catholic) comprises four faculties: Letters, Pedagogy, Sciences, Political Sciences, and Management. In 1968-9 it had an enrolment of 2,718 of which 29 per cent. were female students and 79 per cent. were in the faculties of Letters and Political Sciences and Management (see Table 5).

(v) The University of Van Hanh (private and Buddhist) is composed of a language centre and four faculties: Arts and Sciences, Buddhist Studies, Education, and Social Sciences. In 1968-9, with only two faculties, namely Letters and Buddhist Studies, the total enrolment was 2,519 of which 422, or 16 per cent. were female students (see Table 6).

TABLE 1

HIGHER EDUCATION'S ENROLMENT AND STAFF IN 1969-70*

Institutions	Enrolment	Staff	Student/teacher Ratio
5 Universities	46,053	1,247	37.0
National Agricultural Center	449	95	4.7
4 Other technical institutions	519	193	2.7
Total	47,021	1,535	30.0

*Ministeré de l'Éducation, République du Vietnam, *op. cit.*, p. 17. Three newly established private universities, namely Long Xuyen, Minh Duc and Tay Ninh are not included.

TABLE 2

UNIVERSITY OF CANTHO: ENROLMENT IN 1967-8 AND 1968-9

	Total	Agri-culture	Law and Social Sciences	Letters	Pedagogy	Sciences
1967-8						
Total	1,376	—	522	262	388	204
Male	1,076	—	458	171	280	167
Female	300	—	64	91	108	37
Percentage of female enrolment	21	—	12	35	28	18
1968-9						
Total	1,992	43	763	485	370	331
Male	1,451	36	622	287	253	253
Female	541	7	141	198	117	78
Percentage of female enrolment	27	16	18	40	31	23

Source: Vietnam National Institute of Statistics, *Vietnam Statistical Yearbook, 1970*, p. 134.

TABLE 3

UNIVERSITY OF HUE: ENROLMENT IN 1967-8 AND 1968-9

	Total	Law	Letters	Pedagogy	Sciences	Medicine
1967-8						
Total	3,190	623	1,080	238	1,025	225
Male	2,516	533	771	177	828	207
Female	674	90	309	61	197	17
Percentage of female enrolment	21	14	28	25	19	7
1968-9						
Total	3,297	629	938	407	1,097	226
Male	2,564	542	688	285	843	206
Female	733	87	250	122	254	20
Percentage of female enrolment	22	13	26	30	23	8

Source: Vietnam Statistical Yearbook, 1970, op. cit., p. 134.

TABLE 4

UNIVERSITY OF SAIGON: ENROLMENT IN 1967-8 AND 1968-9

	1967-8				1968-9			
	Total	Male	Female	Percentage of female enrolment	Total	Male	Female	Percentage of female enrolment
Total	26,711	18,543	8,168	30	30,630	21,711	8,919	29
Law	8,224	5,577	2,647	32	10,097	8,057	2,040	20
Letters	7,757	5,007	2,750	35	9,182	5,404	3,778	41
Pedagogy	704	500	204	29	663	420	243	36
Sciences	5,501	4,513	988	18	5,893	4,569	1,324	22
Medicine	1,179	1,040	139	12	1,453	1,234	219	15
Dental Surgery	211	122	89	42	239	128	111	46
Pharmacy	2,577	1,253	1,324	51	2,264	1,096	1,168	51
Architecture	558	531	27	4	839	803	36	4

Source: Vietnam Statistical Yearbook, 1970, op. cit., p. 134.

TABLE 5

UNIVERSITY OF DALAT: ENROLMENT IN 1967-8 AND 1968-9

	Total	Letters	Pedagogy	Sciences	Political Sciences and Management
1967-8					
Total	2,453	952	83	253	1,165
Male	1,881	669	47	208	957
Female	572	283	36	45	208
Percentage of female enrolment	23	29	45	18	18
1968-9					
Total	2,718	1,133	122	429	1,034
Male	1,907	723	64	342	778
Female	811	410	58	87	256
Percentage of female enrolment	29	36	47	20	24

Source: Vietnam Statistical Yearbook, 1970, op. cit., p. 134.

TABLE 6

VAN HANH UNIVERSITY: ENROLMENT IN 1967-8 AND 1968-9

	1967-8			1968-9		
	Total	Letters	Buddhism	Total	Letters	Buddhism
Total	1,529	1,313	216	2,519	2,237	282
Male	1,336	1,154	182	2,097	1,865	232
Female	193	159	34	422	372	50
Percentage of female enrolment	13	12	17	17	17	17

Source: Vietnam Statistical Yearbook, 1970, op. cit., p. 134.

TABLE 7

NATIONAL TECHNICAL CENTER: TEACHING STAFF AND ENROLMENT IN 1968-9

	Teaching Staff			Enrolment		
	Total	Male	Female	Total	Male	Female
School of Chemical Engineering	15	13	2	30	30	–
School of Electrical Engineering	30	29	1	116	116	–
School of Industrial Engineering	30	30	–	135	135	–
School of Civil Engineering	28	28	–	158	157	1
School of Navigation	33	33	–	67	67	–

Source: Vietnam Statistical Yearbook, 1970, op. cit., p. 136.

(vi) The (State) National Agriculture Center includes three schools: Agriculture, Veterinary Sciences, and Forestry. In 1968-9 it had an enrolment of 349 of which 36 were female students and a staff of 71 (66 males and 5 females).

(vii) The National Technical Center comprises five schools: Chemical Engineering, Electrical Engineering, Industrial Engineering, Civil Engineering (Public Works), and Navigation. In 1968-9, it had a total enrolment of 506 with only one female student in the School of Civil Engineering, and a staff of 136 (see Table 7).

(viii) The National Institute of Administration designed to train administrators for the government had in 1968-9 an enrolment of 525 including 86 female students and a teaching staff of 54 including 4 female teachers.

(ix) The Oceanographic Institute has two departments of graduate studies: Physics and Chemistry, and Biology, with a total enrolment of 20 in 1971-2. It will likely be reorganized and converted into a university specializing in Oceanography.[4]

Besides these institutions, there are presently three other universities, namely, Long Xuyen, Minh Duc and Tay Ninh. Being recently founded, they are of little importance at this stage in terms of enrolment, teaching staff and other facilities, and therefore, will not be analyzed in the present paper.

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[4] Ministère de l'Education, République du Vietnam, *op. cit.*, p. 24.

The accelerating pace of growth of higher education in Vietnam could be better illustrated when one considers the ever-increasing number of students during the last decade. The total enrolment has more than quadrupled from 10,024 in 1959-60 to 42,424 in 1968-9, particularly in law and social sciences. It has recently been reported by the Ministry of Education to have sharply increased to 68,671 in 1971-2. Of this total, the University of Saigon alone accounted for 50,430. The rest was divided between the University of Huế with 4,499, the University of Cantho with 4,319, the University of Dalat with 3,938, Van Hanh University with 3,400, the National Agricultural Center with 603, the National Technical Center with 887, the National Institute of Administration with 675, and the Oceanographic Institute with 20.

It is interesting to note that while higher education as a whole achieved an increase in enrolment of 424 per cent. in 1968-9 as compared with 1959-60, the rate of increase in technical and professional education during the same period was only 150 per cent. At the same time, the graduate/enrolment or passed/presented ratio was far better in the technical and professional institutes than in the universities. This is due to the very restricted number of students admitted to these institutes through very competitive entrance examinations. However, in view of the increasing enrolment, the output of the whole higher education system is not satisfactory. For the whole period from 1954 to 1969, there were a total of 2,816 licentiates and 369 diplomas of higher studies in law; 710 licentiates and 28 diplomas of higher studies in letters; 434 licentiates, 13 diplomas of higher studies and 10 doctorates in sciences; 254 secondary education teachers of the first cycle and 949 secondary education teachers of the second cycle; 1,176 doctors in medicine; 192 dental surgeons; 1,325 pharmacists; 25 architects; 998 administrators and 136 diplomas of higher studies in administration; 374 civil engineers, 183 electrical engineers; 422 engineers in agriculture, forestry and veterinary sciences; and 186 industrial arts engineers. Neither have enrolment expansion and output increase taken place in fields relevant to the needs of national development, but in such fields as law and letters (see Table 8). Moreover, the quantitative growth of higher education as mentioned above in most cases is not matched by a corresponding improvement in quality. This, however, will be dealt with later on in this paper.

The teaching staff has also kept increasing, though at a slower rate, from a total of 394 in 1959-60 to 925 in 1968-9. The teacher/student ratio has thus deteriorated, from 1:25 to 1:45 respectively (see Table 9).

The ratios are still much lower in law (1:133 in 1968-9), letters (1:97 in 1968-9) and sciences. This is because these faculties admit all students merely

TABLE 8

HIGHER EDUCATION: ENROLMENT, STUDENTS PRESENTED AND PASSED EXAMINATIONS (SCHOOL YEAR: 1959-60; 1966-7; 1967-8; 1968-9)

	1959-60	1966-7			1967-8			1968-9		
	Enrolment	Enrolment	Presented	Passed	Enrolment	Presented	Passed	Enrolment	Presented	Passed
Total	10,024	34,466	7,754	5,495	36,588	11,096	7,761	42,424	9,707	7,195
Law	2,269	8,871	476	328	9,369	1,212	673	11,489	940	480
Letters	2,056	10,021	3,049	2,537	11,364	3,921	3,065	13,975	3,290	2,803
Pedagogy	816	1,416	384	358	1,413	552	460	1,562	401	385
Medicine	858	1,378	n.a.	137	1,403	252	194	1,679	252	194
Dental Surgery	125	172	29	29	211	23	23	239	23	23
Pharmacy	507	2,880	262	246	2,577	245	236	2,264	245	236
Sciences	2,497	6,192	3,218	1,542	6,983	4,429	2,655	7,750	4,133	2,663
Political Sciences and Management	n.a.	878	n.a.	n.a.	1,165	n.a.	n.a.	1,034	n.a.	n.a.
Architecture	172	1,084	14	7	919	9	9	839	9	9
Technical and professional institutions (National Agricultural Center, National Technical Center, National Institute of Administration)	1,014	1,734	322	311	1,545	453	446	1,593	414	402

Source: Compiled from the *Vietnam Statistical Yearbook, 1970, op. cit.*, pp. 132-3, 141-3.
n.a. = not available.

TABLE 9

HIGHER EDUCATION: TEACHING STAFF BY FACULTY AND SEX FROM 1959-60 TO 1968-9

	Total		Law		Letters		Pedagogy		Medicine, Dentistry and Pharmacy		Sciences		Architecture	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1959-60	368	26	47	1	73	4	87	10	79	7	59	4	23	
1960-1	792	70	51	4	76	6	85	13	79	7	93	5	408	35
1961-2	448	46	48	4	102	10	74	7	114	11	86	13	24	1
1962-3	462	55	52	3	109	13	53	6	133	18	91	14	24	1
1963-4	521	74	70	3	109	11	103	21	115	17	98	22	26	
1964-5	418	73	50	3	101	15	29	5	125	19	88	31	25	
1965-6	528	77	50	3	124	17	49	13	151	14	127	30	27	
1966-7	650	91	41	3	218	23	51	11	139	19	171	35	30	–
1967-8	616	87	47	5	171	12	51	18	133	21	179	31	35	–
1968-9*	794	131	82	4	138	13	68	16	224	66	210	30	72	2
Vietnamese	768	128	80	4	129	11	68	16	214	66	205	29	72	2
Foreigner	26	3	2		9	2	–	–	10	–	5	1		

Source: Vietnam Statistical Yearbook, 1970, op. cit., p. 135.

*The 1968-9 figures are subdivided here into Vietnamese and Foreign students.

on the basis of the full baccalaureate (high school diploma) while other faculties (pedagogy, medicine, dentistry, pharmacy) and technical or professional schools (National Agricultural Center, National Technical Center, National Institute of Administration) give a very competitive entrance examination which usually eliminates more than 90 per cent. of the applicants (see Table 10).

TABLE 10

ADMISSIONS IN SOME FACULTIES AND PROFESSIONAL SCHOOLS (1969-70)[5]

School	Applicants	Admitted	Percentage Admitted
Medicine	4,554	232	5.1
Pharmacy	4,100	391	9.5
Architecture	1,183	54	4.6
Public Works	904	50	5.5
Electricity	954	36	3.8
Chemistry	1,182	31	2.6
Industrial Engineering	766	51	6.7
Merchant Marine	709	46	6.5
Agriculture, Forestry and Veterinary	3,500	185	5.3

For various reasons, most university teachers also hold executive positions in various government or private agencies, practice other professions, and/or are required to give lectures in several different universities. The combined effect of these factors is that they have no time left for research or the guidance of independent research by students.

The problem of the unfavourable teacher/student ratios is further aggravated by the fact that part-time teachers constitute a large proportion, sometimes up to 60 to 80 per cent., of the teaching strength and over two-thirds of the regular staff are below the doctoral level (see Table 11).

The prospects in the near future remain very gloomy since the war, meagre salaries eroded by increasing inflationary pressures, and their ancillary im-

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[5] Do Ba Khe, 'The Community College in Vietnam', *Vietnam Weekly Bulletin*, Vol. V No. 22, 22 May 1972.

TABLE 11

HIGHER EDUCATION: UNIVERSITY TEACHING STAFF BY SEX AND CATEGORY SCHOOL YEAR 1968-9

School	Total	Professor (Titular, Associate, Assistant)	Lecturers	Demonstrators	Assistants	Other Teaching Staff
Total	925	251	90	50	177	357
Law	86	20	7		1	58
Letters	151	66	7	5	6	67
Pedagogy	84	16	7	1	6	54
Medicine and Dentistry	212	39	24	2	69	78
Pharmacy	78	9	4	6	11	48
Sciences	240	51	17	36	84	52
Architecture and Political Sciences and Management	74	50	24		–	–

Source: Compiled from *Vietnam Statistical Yearbook, 1970 op. cit.*, p. 135.

pacts, make the teaching profession less and less attractive to qualified nationals within the country, let alone those actually working abroad. Sporadic efforts made in recent years to train university teachers within the country have been hampered by the internal weaknesses of the higher education system itself as much as by the general mobilization law enacted in 1968.

Furthermore, the budget appropriated to higher education has never been adequate. On the basis of a GNP growth rate of 4 per cent. and enrolment and per student recurrent cost projections, a Unesco team in 1963 suggested that the percentage of GNP allocated to education should grow, at a minimum, from 3.1 per cent. in 1965 to 5.2 per cent. in 1980 and, at a maximum, from 3.1 per cent. to 6.3 per cent. over the same period. If to this is added the capital costs of expanding facilities for increasing enrolments, at the rate of 30 per cent. of average recurring expenditure, a minimum of 7-8 per cent. of the GNP would be required, on an average, between 1963 and 1980. But so far total educational expenditure have only accounted for 0.9 to 1.5 per cent. of the GNP, fluctuating between 9 and 13.3 per cent. of the national civilian budget or between 3.5 and 5.3 of the total national budget (i.e. including defence and military expenditures). In 1969 and 1970, only 9.6 and 9.7 per cent. respectively of the budget of the Ministry of Education was allocated to higher education. It is interesting to observe that the higher education budget increase in 1970 over that in 1969 was not enough to compensate for the increase in the cost of living during that period while the enrolment increase over the same period was by about 11 per cent. from 42,424 in 1968-9 to 47,021 in 1969-70 (see Table 12).

MAJOR PROBLEM AREAS

Under the pressure of ever-increasing enrolments, new school and universities have been set up without due attention to various pre-conditions for their success nor do they follow any plan. Numerous problems, therefore, arise which are further compounded by rapidly increasing enrolments, the shortage of qualified staff, the inadequacy of physical and financial resources, and the pernicious consequences of a ravaging war. The whole system is thus entrapped in a vicious cycle with no breakthroughs in sight in the near future.

Problems Arising from the Absence of an Appropriate Charter

At present, the organization and operation of all public universities in Vietnam are governed by the charter jointly signed by the French and Vietnamese authorities on 12 October 1953 for the then University of Hanoi. The following year saw Vietnam divided into two separate states by the Geneva Agreements signed on 20 July. Since that date, the two Vietnams have undergone tremendous changes through precipitated events in the economic, political and social fields. As a matter of course the charter, thus rendered obsolete, has constantly been the target of vitriolic criticisms; but a new charter still remains to be drafted.

Although the Constitution promulgated on 1 April 1967 recognized in its article 11, paragraph 1, that 'Culture and education must be considered matters of national policy on a national scientific and humanistic basis', besides this general statement of principles there are no other legal documents which clearly define the goals and objectives of higher education, and its role in the national community. The old professors wielding the leadership in higher education are usually conservative and often resist any proposal of, or pressure for, drastic changes. Academic activities have, therefore, become stagnant, dull and sterile while society somehow has to change and adjust for survival and progress.

Within the framework of the current charter, universities and their faculties, in line with the pattern of the French system, have a considerable degree of autonomy. This is reaffirmed by the Constitution which states in its article 10, paragraph 3, that 'University education is autonomous.' This general reaffirmation has, however, been freely construed according to one's own fancy

TABLE 12

GNP, NATIONAL BUDGET, ACTUAL EXPENDITURE BY THE MINISTRY OF EDUCATION AND EXPENDITURE ON HIGHER EDUCATION FROM 1962 TO 1969

(Million piastres)

				Educational Expenditure					
				Ministry of Education				Higher Education	
Year	GNP (at current market price)	National Budget	Civilian Budget	Amount	% of GNP	% of National Budget	% of Civilian Budget	Amount[a]	% of Budget of Ministry of Education
1962	93,792	22,018	10,012	1,175	1.2	5.3	11.7	n.a.	
1963	100,303	25,890	12,265	1,348	1.3	5.2	10.9	n.a.	
1964	114,477	28,856	14,575	1,387	1.2	4.8	9.6	n.a.	
1965	144,754	47,780	19,267	2,239	1.5	4.6	11.6	n.a.	
1966	237,589	64,010	25,490	2,298	0.9	3.5	9.0	n.a.	
1967	356,660	86,190	33,370	4,293	1.2	4.9	12.8	n.a.	
1968	387,180[b]	110,840	38,965	4,909	1.2	4.4	12.5	n.a.	
1969	n.a.	138,049	46,458	6,194	–	4.4	13.3	600	9.6
1970	n.a.	190,562[c]	69,062[c]	8,368[c]		4.3	12.1	818[c]	9.7

Source: Vietnam Statistical Yearbook, 1970, op. cit., pp. 267, 273-4, 276.

[a] Included are the budgets of Saigon University, Hue University, Cantho University, National Agricultural Center, National Technical Center and Oceanographic Institute.

[b] Banque nationale du Vietnam, *Revenu national du Vietnam 1968*, April 1971, p. 7.

[c] Budgeted expenditures.

n.a. = not available.

and viewpoint. There is no intervening agency ever conceived to ensure or even promote adequate consultation and coordination between different institutions, and sometimes between various departments of the same institution as well. Neither is it possible for any rational mechanism to emerge from such a situation to help determine priorities in spite of scanty human, physical and financial resources.

On the other hand, the joint charter does not provide room for any autonomous body to coordinate public and private efforts to strengthen and improve higher education nor to periodically revise its goals and objectives to cope with future changes. In a word, the charter is to higher education what the Constitution is to a nation. The detrimental effects of the absence of a progressive charter on higher education are pervasive and can be found in various aspects of its organization and operations.

Problems Arising from the Rapidly Increasing Enrolments

The reasons leading to an accelerating pace of quantitative growth of higher education during the last decade are many: the high rate of population growth (over 2.6 per cent. per annum), the social and cultural aspirations in a newly-independent nation, the literary tradition of the educational system, the needs of national development, etc. Whatever these reasons may be, this very increase in enrolment in the face of the various current constraints has given rise to a wide range of problems which, for the national interests, must be solved, and the sooner the better.

In 1970, 18,485 students passed the full baccalaureate (secondary school diploma). According to an estimate by the Ministry of Education, the number of secondary school graduates will reach 26,000 in 1971, and 36,000 in 1972.[6]

The increase in secondary school output is almost two-fold within a two-year period; and the pressure on higher education will be greater as time passes by. Yet the current situation is already critical. As secondary education is traditionally literary and not work-oriented, a large proportion of its graduates are likely to enter institutions of higher education. Owing to scanty budget appropriations, a very limited number of them will be admitted to technical or vocational colleges. The bulk of them, in spite of their intention and vocation, will inevitably flock to the already overcrowded faculties of Law, Letters and Sciences without knowing for sure whether what they learn there will help them find a job in, or have anything to do with, the world of work. To obtain a university degree has therefore become the only and immediate objective of their studies.

[6] *Ibid.*

Once admitted, students are not provided with adequate facilities for their studies.

Lecture theatres are often small and over-crowded. Worse still, in certain faculties such as Law, Letters, Sciences, students have a really hard time in finding a place in a regular lecture. Classes become unmanageable; teachers in most cases cannot control the regular attendance of their students, let alone know them individually, and guide and counsel them through their studies.

Library facilities are very limited; reading room space is inadequate; textbooks in Vietnamese not available while those written in English or French are not numerous enough to go round, and students have hardly an adequate command of any of these two foreign languages; while periodicals and magazines are very rare.

Laboratories, which are poorly equipped and overcrowded, often have to be operated on many shifts per day to permit students to do their compulsory laboratory work.

All these factors interfere seriously with their studies and serve to explain the failure by the system of higher education to fully develop the potentials of students, to discover, and provide a nurturing ground for, talented and gifted students. They also lead to the current high percentage of drop-outs and repeaters.

There is no provision concerning students within the charter of the University of Hanoi. Public universities have, however, managed to build dormitories for students which are still very far from meeting their increasing demand. At present, within the area of Saigon there are only three government and three denominational hostels offering residential facilities to about 1,500 students out of a total enrolment of 55,995 (less than 3 per cent.).[7] The University of Hué provides accommodation for about 200 out of 4,499 enrolled in 1971-2 (about 4 per cent.), and the University of Dalat offers accommodation to about 200 (about 5 per cent. of its total enrolment in 1971-2 of 3,938). Other extra-curricular activities are left to the care of the students themselves, and organized through university student associations, the National Union of Students, the World University Service Committee (WUS), the Voluntary Youth Work Camp, and other religious student bodies.

There are no organized student guidance services and out-of-class relationships between students and teachers for most cases are almost non-existent.

Furthermore, the budget appropriated for student extra-curricular activities is only in name. The situation is allowed to deteriorate by the increasing number of freshmen each year.

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[7] Including enrolments in Van Hanh University and the technical and professional schools in 1971-2.

Scarcity of Teaching Staff

As mentioned earlier, quantitatively, the major staffing problem manifests itself in the low staff-student ratios (1:45 in 1968-9), particularly in the fields of Law, Letters, and Sciences. The situation looks still more depressing from the qualitative viewpoint. A very large proportion of the teaching staff is part-time and below the doctoral level. This is due not only to a grave shortage of qualified teachers, but also to their current meagre salaries. Needless to say, this state of affairs inevitably has adverse effects on the quality of higher education of the country.

For various reasons, the majority of professors live in the capital (Saigon) and commute to Cantho, Dalat, Huế, etc. to teach. Busy with other work, they usually postpone their teaching trips until three to four months before the examination date. Then they would spend several consecutive days at each university, and give their lectures at an average of six hours per day without due regard to their students' ability of comprehension and assimilation.

Other on-the-spot teachers discharge their instructional duties three hours a week, then spend the rest of their time doing other work outside the university for supplementary incomes necessary to keep up their living standards. They often devote more time to such work though teaching still remains their main profession.

The charter of the University of Hanoi vests all responsibilities, from instruction and tutorship to management and administration, on the professors. But in the present context of higher education in Vietnam, the professors cannot properly perform even their teaching function, let alone their other peripheral duties. In classes, they usually monopolize the conversation since they do not have time to stimulate students to question or participate in the learning process. Neither do they have any chance to get acquainted with them individually, understand their problems, guide and counsel them, or judge their capabilities.

As a result, students' abilities could be evaluated only according to their grades achieved at the two examinations held yearly. Since examination procedures continue to select a small number of students who are able to meet the purely-knowledge requirements, and eliminate a large proportion without worrying about their future, to pass examinations has become the only objective of the students.

No research has been directed thus far by universities to problems of high priority in national development except for some disparate efforts made by the teaching staff and students of the National Agricultural Center. This can be explained by the fact that universities do not have research funds and facilities, the present organization is too rigid to allow any cooperation between various faculties and universities in research, while the government does not encourage, and often prefers foreign researchers on contract to native academics. But the main reason is perhaps the human factor. Due to heavy teaching loads, administrative responsibilities, low salaries and hence part-time jobs outside the university, professors have no time left for doing research even if they were really able to. This further interferes seriously with their teaching because research, being a permanent process of learning, will set an example of continuous self-improvement for their students; it will also help bring about the corresponding consistency between what they teach and what has been happening in their environment to their students' benefit.

The acute shortage of qualified teachers, and hence the absence of research also constitute serious hindrances to any meaningful reforms of curriculum which is still modelled upon that of pre-war France and characterized by rigid barriers between general and technical fields and between school and out-of-school education. Indeed, to make the curriculum a means by which the quality of instruction is continuously upgraded requires not only permanent research, but also a far greater number of qualified professors than are actually available.

Rate of Wastage and Problem of Placement of Graduates

The above having been said, one understands easily the poor performance of the higher education system in Vietnam thus far.

Although the cost of education in Vietnam, as a share of the national wealth, is very low, it is extremely high in terms of the number of graduates. For instance, it is reported by the Faculty of Letters at the University of Saigon that while the overall cost per student is only 717 piastres, the cost per graduate amounts to 640,000 piastres.

The rate of wastage at this level is thus very high. The ratio of graduates to enrolment was 1 out of 32 in 1966; and 1 out of 24 in 1967.[8]

Worse still, the barriers between various faculties, various schools, and various fields of studies are so rigid that students cannot change their major fields when necessary: for example, a medical student who fails at the end of his fourth year has to begin again in the preparatory or first year of another faculty or school.

No surveys of trends of graduate employment, underemployment, or unemployment are of any value for the time being since the moment the students graduate they are drafted into the armed forces. It is, however, generally considered that due to the direct influence of the current education

[8] Nguyen-van-Hai, *Education in Vietnam, a Study in the Light of Objectives of Permanent Education*, Hue, 1970, p. 187.

system as well as to the war-strained economy, there is over-supply of some categories of graduates (in law, letters, sciences) side by side with acute shortage of others (in medicine, dentistry, education, agricultural and industrial engineering). One needs only to look back at Table 8 and the total output in each field mentioned earlier to have an idea about the imbalance of the present education system. There are too many students or even graduates in the arts and humanities, and not enough in other technical and specialized fields, particularly in medicine and teacher training. There is also an imbalance between university graduates, technicians, and skilled manpower or artisans. At present, the ratio is one university graduate to two technicians while it should be one to five.

Financial Problems

With the exception of the private universities, higher education in Vietnam is almost entirely financed by the Government since fees, where they are charged, are quite nominal. However, as a percentage of GNP, expenditure on education is never more than 1.5 where it should be around 5.0; and the amount allocated to higher education remains at less than 10 per cent of the budget appropriated to the Ministry of Education. The greatest part of this budget (about 85 per cent.) is spent on payments of personnel's salaries and allowances. Furthermore, the Charter of the University of Hanoi does not have any provision for alternative methods of financing university education.

CONSOLIDATION RATHER THAN EXPANSION: CONDITIONS FOR A SOUND DEVELOPMENT OF HIGHER EDUCATION IN VIETNAM

In view of the acute shortage of qualified staff and serious financial constraints, consolidation rather than expansion, at least for the 1970's, seems to be the most desirable way to a sound development of higher education in Vietnam. What is termed as educational reforms so far is merely a quantitative expansion of the old French system with very slight changes in its content and techniques.

The time is indeed ripe for drastic changes since, as it is rightly pointed out in an Indian report on education, 'traditional societies which desire to modernize themselves have to transform their educational system first before trying to expand it, because the greater the expansion of the traditional system of education, the more difficult and costly it becomes to change its character'.[9] Moreover, the accelerating growth in quantitative terms requires enormous investments of both human and financial resources which are actually very limited in Vietnam. The rapid expansion of higher education in recent years has consequently prevented any serious efforts to improve its quality. The reorganization and reorientation of the objectives of higher education and of the nature of the training that it provides are therefore urgently needed; development and reforms are connected inseparably. So, the future Charter must provide room for a progressive mechanism by which two categories of decisions are to be made: decisions related to fundamental goals of education, and operational and technical ones concerning the translation of these broad goals into educational objectives, structures, curricula, etc. This mechanism must also be designed in such a way that these decisions could be revised from time to time to cope with the accelerating changes in cultural, economic, and social conditions of the country.

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[9] India, *Report of the Education Commission, 1964-66*, quoted by Nguyen-van-Hai, *op. cit.*, p. 244.

The need has long been felt for a better adjustment of higher education to the new requirements of the society in view of cultural, economic, and social changes which have already taken place in the country or are likely to take place in the future. National development process is necessarily associated with fundamental and pervasive transformation in motivation, attitudes, habits, modes of thought and work. Education must be seen as an instrument for bringing about social change and transformation. Its goals, functions, methods, and tools have to be re-defined and re-fashioned to meet the needs of national development both in relation to manpower requirements and employment, and to national and social cohesion. The role of higher education is thus to bridge the gap that at present isolates it from urgent national concerns; to provide leadership along a broad front of national efforts; to direct research to problems of high priority in national development; to train personnel at all levels and in the forms needed in the economy; to transmit and enrich common cultural and moral values in order to make culture a living and growing tradition; to transmit knowledge and skills into the daily life of common people in urban as well as rural areas; and to improve the quality of education.

Under these circumstances, emphasis should be switched to the reorientation and consolidation of the existing institutions and any further quantitative advances must be postponed until well-trained staff and financial resources are readily available. Unless this condition is met, the efficiency of higher education cannot be ensured.

A better balance between various fields of specialization in line with the skilled manpower requirements for national development must be sought. Limited education resources, with investment in education not exceeding 1.5 per cent. of the GNP, requires that priorities be decided, and more efforts and a larger share of resources devoted to the strengthening of those disciplines generally considered as essential to national development, namely agriculture, industry, medical services and teacher training.

Higher education in agriculture and related fields is at present provided both by the National Agricultural Center and the College of Agriculture of the University of Cantho. In 1968-9, the National Agricultural Center alone produced seventy-five engineers which already exceeded the annual average output for forty suggested by Guy Hunter by 90 per cent. With the additional output of the College of Agriculture of Cantho in coming years, even the annual output target of 200 engineers suggested by the Unesco Mission will not be unattainable.[10] What is left to be done is to promote applied research on economic and social problems of the rural area, improve and develop laboratory and other facilities suitable for refresher courses for agricultural personnel, initiate students into the techniques of research, and reorientate the curricula in such a way that some form of extension work becomes an integral part.

In industry, the demand for engineers will not grow fast since the economy of Vietnam is, and will remain, a dominantly agricultural one in the forseeable future. It is well within the capacity of the existing institutions to meet this manpower requirement of the country. The need is for more well-trained technicians and artisans.

The real difficulty lies therefore with the facilities for practical training both in skills of management and in technical knowledge. In other words, as is rightly pointed out by Guy Hunter, 'the urgency lies in developing apprenticeship, in-service training, evening-class work, and all the means of turning paper qualifications into practical ability'.[11] Whether or not this much-needed reorganization can be carried out depends upon the extent to which the industrial sector is prepared to play its full part in practical training. This seems highly probable since the government is an important shareholder in, or wholly owns, most of the new industries.

With regard to medical education, in 1968-9, the output of the two faculties of medicine of the Universities of Hué and Saigon was 194 doctors. At the same time, in 1969, a total of 1,431 physicians were practising in the whole country for a population of 17,862,000.[12] These figures gave the doctor/population ratio of 1:12,400 which was slightly better than the proportion of 1:14,000 foreseen by Guy Hunter for 1970, and much better than in 1963 with the proportion of 1:21,000.[13] Progress is rather slow since training in medical sciences is necessarily lengthy. However, a substantial increase in resources allocated to, and a more efficient use of, the existing schools, rather than the establishment of additional schools, could help raise their total output, and hence further improve the doctor/population ratio. More important is perhaps the problem of organizing a dispersed health service which reaches down to the villages, mobilizing and deploying medical personnel into rural areas once the war draws to an end.

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[10] With regard to manpower requirements, refer to Guy Hunter, *Higher Education and Development in Southeast Asia*, Volume III, Part 1 of UNESCO/IAU *High-level Manpower, op. cit.*, p. 165 for further details.

[11] *Ibid.*, p. 166.

[12] *Vietnam Statistical Yearbook, 1970, op. cit.*, pp. 346, 371.

Unlike other fields of higher education, teacher training must be strengthened both quantitatively and qualitatively. Progress in this field so far fails to keep pace with the rapid growth of enrolments. This has resulted in a further deterioration of the teacher/student ratio (see Table 13).

On the basis of the provision of primary/education for up to 95 per cent. of the primary school-going population and secondary education for up to 30 per cent. of the corresponding population, together with 7 per cent. of secondary-school graduates proceeding to higher education, it has been estimated that total enrolment will be 4.6 million by 1978, an addition of 2.0 million compared to 1968.[14] A substantial proportion of secondary enrolment will be spread into the technical and vocational fields. This will surely require a substantial increase in teaching personnel in the 1970's. The biggest strain would be in the expansion of technical and vocational education.

To cope with the increasing requirements of well-trained teachers, more efforts must be devoted by the existing institutions to the training of teachers, particularly for secondary education which is now undertaken by the Faculties of Pedagogy of the Universities of Cantho, Huē, Saigon, Dalat, and Van Hanh, as well as by the teacher-training centres for technical and agricultural education. It might also be more desirable to link various primary teacher-training schools to universities as soon as this seems possible. The special task thus devolved on these institutions are not only to increase their outputs to meet urgent-teacher needs in the face of rapidly expanding enrolments, but also to retrain under-qualified teachers, to provide the able ones with further education so as to help them attain higher qualifications, and to organize periodical courses to keep teachers in touch with development in their subjects and in the methods of teaching.

Other disciplines must be coordinated and synchronized between various

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[13] Hunter, *op. cit.*, p. 167.

[14] Asian Development Bank, *Southeast Asia's Economy in the 1970's*, Manila, 1970, p. 556.

TABLE 13

TEACHER/STUDENT RATIO IN 1958-9 AND 1967-8

Level	School Year	Enrolment	Number of teachers	Teacher/ Student ratio	Increase in the number of teachers over the period
Primary	1958-9	1,090,085	19,868	1:55	
	1967-8	2,024,000	34,066	1:60	+14,198
Secondary	1958-9	138,928	4,401	1:32	
	1967-8	500,000	13,338	1:37	+ 8,937
Tertiary	1958-9	6,698	618	1:10	
	1967-8	33,000	789	1:24	+ 171
	1968-9[a]	40,831	925	1:45	+ 307
Technical and vocational	1958-9	9,707	551	1:17	
	1967-8	16,000	529	1:30	22

Source: Nguyen-van-Hai, *op. cit.*, p. 182.

[a] *Vietnam Statistical Yearbook, 1970, op. cit.*, pp. 133 and 135.

faculties or schools within the same university as well as between different universities. This will serve the purpose of avoiding duplication, increasing the teaching efficiency of professors specialized in general subjects, making the best use of teaching materials, creating conditions suitable for interdisciplinary research, ensuring the horizontal continuity between various types of education, making higher eeucation better integrated, more diversified, more comprehensive, and at the same time more flexible. The coordination and synchronization will also facilitate the promotion of a unity of purpose in social action and behavioural adjustment to economic development and social change. Perhaps the Ministry of Education is following the same line when considering the creation of a preparatory centre at the University of Saigon in which the first two years will be reserved for the teaching of basic subjects of foreign languages, human sciences, and general sciences common to all branches of studies; after that, students will be oriented to major in different fields of specialization, according to their abilities and vocation.

At the same time, priority in national policies must be given to a qualitative transformation of higher education to make the system better adapted to perform the increasingly diverse tasks that future growth will devolve on it. By quality of education, it is meant not a single and unchanging concept, but rather a multiplicity of processes, relationships and outcomes which interact and intermingle, from the skills in observing, analyzing, communicating, testing, experimenting, discovering, learning to learn, the capacity to learn and relearn throughout a working career to the structure, curriculum, instructional methods and evaluation procedures. Thus to improve the quality of education requires qualified teachers in sufficient number, progressive curricula, and continuing research.

The majority of full-time senior teaching staff hold foreign qualifications. To improve the teacher/student ratio it is still generally expected that new university professors would somehow be drawn from Vietnamese now studying or working abroad. However, in spite of various efforts made in recent years, Vietnam has had rather disappointing experiences in attracting qualified nationals from foreign countries, and continues to lose a number of teachers and students who go abroad for further studies and do not return. The inadequate salary scales also deter potentially qualified candidates from joining the staff and impair the performance of those who have already been teaching in various universities. An increase by at least 200 per cent. of the average salary of university teachers which is currently around US$80.00 per month seems a necessary step to be taken sooner or later. It appears to be equally necessary to promote the training of university teachers within the country by developing postgraduate studies to provide more adequately qualified professors, particularly within the arts, science and law faculties. On the other hand, research stimuli, opportunities for further studies and refresher courses abroad must be created to help upgrade their quality and improve their performance.

Curricula must also be reformed and modernized to better harmonize higher education with the development of the country and better designed for the integral development of the individual and his role in society. They must reflect the most up-to-date and essential knowledge. They must be designed in such a way as to adjust the content and methods of education to the widening range and variety of ability and aptitude of students and to foster a spirit of inquiry and adaptability to changing environment. As cultural, economic, and social needs are mediated through the curricula, the curricula have to be sensitive and responsive to constant changes in these fields. Furthermore, they must ensure a balance between essential and interdependent components, namely humanistic element, scientific element, education in moral values, and vocational and practical knowledge and experiences to develop practical skills, and understand the links between knowledge and its application in everyday life.

Thus the university is the centre of both teaching and research. Its scope and purposes are to be broadened to include technological education, extension work, extramural activities, cultural and community development as well. Such a role of higher education requires a basic minimum of effective interrelationships between various faculties or schools either academic or technical and vocational, and between the universities and centres or institutes themselves.

The mechanics and necessary measures have therefore to be developed to serve these ever-widening ends of cultural, economic, and social change and transformation. For instance, there must be continuous channels of consultation between the various institutions. Courses assisting and supplementing each other institution's programme, such as various inter-faculty courses initiated by the University of Huế recently, should be organized with a consequential regulated circulation of students between various specialist courses. Measures to bring about a fundamental reorientation of examinations must be sought to ensure close congruence between examinations and curriculum objectives and better assessment of a wider range of educational outcomes in order to serve the purposes that are appropriate to different fields of studies and the varying needs of students.

On the other hand, high priority should be given to research, particularly to applied and inter-disciplinary research to assimilate decades of technological innovation, to bridge the gulf between past and future and between modern processes and traditional attitudes. In the present context of higher education in Vietnam, resources must be combined and team research conducted to seek ways to increase and enrich the contributions of the university to national development, such as adapting the various levels of education to the manpower needs of different sectors of the economy, working out feasible measures to promote selected development goals, and determinign desirable new directions for change, etc. The significance of inter-disciplinary research in strengthening the overall contributions of higher education to the planning as well as the operational aspects of development can never be over-emphasized.

CONCLUSIONS

It is encouraging to note that the development plan of the University of Saigon has been drawn up along the lines mentioned above and efforts to restructure and renovate other institutions of higher education in Vietnam are made in the same direction. This trend seems, however, very slow in gathering momentum while the consolidation of the system after a period of accelerating quantitative expansion, in the face of limited human and financial resources, and given its anachronism, becomes more and more urgent in our changing times.

The task ahead is indeed very complicated and difficult as consolidation involves not only a quantitative restriction of growth, an enlargement of the sphere of influence to encompass a variety of extra-curricular activities, a continuous improvement of the quality, but also a horizontal continuity or integration between various types of education either at school or out of school, and a vertical continuity between various levels or stages of education. At present, the universities and other institutions of higher education are isolated from one another, have only indirect links with the rest of the system, and their development is not integrated with overall education plans.

The creation of a central agency to cater to higher education development will be of utmost importance. This agency could be vested with the responsibilities of keeping curricula under continuous and informed review, anticipating changes and responsively readjusting the priorities, ensuring inter-disciplinary research, a balanced development between various fields of education, and coordination between different faculties, schools, universities and other institutions of higher education; and integrating the whole system with national development plans.

To develop an intimate and fruitful relationship between higher education and secondary education is also a *sine qua non* for the success of the efforts of consolidation as well as for a sound development of higher education. Secondary education must therefore expand and be regarded as terminal and not merely as a prelude to the university. It must be broadened and diversified to serve effectively the needs of the graduating students, hence linking the output to the economy's requirements of middle-level skills. Here arises the need for new types of post-secondary institutions (such as the community college) which are flexible enough in their programmes to give full-time as well as part-time education, and to participate in in-service and on-the-job training. This is, however, another issue which requires further exhaustive studies beyond the scope of the present paper.